

1168. i. 27
2
1a:5456.

PRACTICAL
OBSERVATIONS

ON THE

Epidemical FEVER,

WHICH

Hath reign'd so violently for these Two
Years *past*, and still rages at this *present Time*.

WITH

Some incidental REMARKS, shewing
wherein this *fatal Distemper* differs from *Common Fevers*; and more particularly why the
BARK has so often fail'd; and Methods
prescrib'd to render its USE more effectual.

In which is contain'd,

A very REMARKABLE HISTORY of a
SPOTTED FEVER.

By EDWARD SROTHER, M.D.
Coll. Christ. Cantab. & Coll. Med. Lond. Reg. Colleg.

LONDON:

Printed for CHARLES RIVINGTON, at the *Bible*
and *Crown* in St. Paul's Church-Yard. 1729.

[Price Two Shillings Six-pence.]

a. 747.



THE
PREFACE.

AS a Fever has reign'd for Two Years past, and has prov'd fatal to many, and has help'd, in one Week, to swell our Weekly - Bills to near one Thousand in this Town, I hope it will not be disagreeable to the Gentlemen, especially the young ones of the Faculty, to have some few Observations communicated to them, which are the Result of Remarks made on Persons labouring under this Disease; and which I rather chose to publish under the Name of Observations, than of Histories, where I must have made publick the Names of the Persons, whose Liberty for so doing I had never demanded: It is never material to know who was ill, so we know what ailed them, and how they were restored to Health.

So far as I have been able to observe, the past and present Fever have been Remitting at first, and by Neglect or Mismanagement

nagement have turn'd Malignant, and in some few Pestilential. It is very natural for a Fever to take its Course, and wherever the Sick have had no Regard to themselves, the Consequences rarely turn favourable, but on the contrary, the Spirits are either exhausted, or the Blood becomes inflam'd; from whence it cannot be wonder'd at, if we meet with fix'd Inflammations, or protracted Fevers, with Hecticks, Cachexies, Lienteries, Consumptions, or with a Thousand of irregular Symptoms portending Excision and Mortality.

I do not pretend that these Remarks add any Thing new to the Criticon Febrium; but they confirm the Methods I have there pursu'd, and they serve to illustrate that Piece, and to put it in a clearer Light. I am very sensible how short and unfinish'd that Discourse may appear to some, for want of Histories, and a more minute Descant on many Particulars, which I am so far from explaining there, that I have rather hinted at them, than drawn them into a proper Extent. I only design'd that as a Piece in Miniature, not a full Length; and whatever Lines I shall draw for the future, will only serve to finish it. Fevers
I. intro-

introduce such a Variety, and so infinite a Complication of Symptoms, that whoever attempts an Essay on them, must look into so many Circumstances, and such a strict Eye must be given to so many Heads, that he cannot avoid being expos'd, or shewing his Skill. Proper Judges quickly find out the Foible of the former; and, contemning bad Criticks, few are capable of passing Sentence on the latter: If the Subject treated on, be concisely handled, it is odds, but somewhat will be deem'd to be omitted, unless a farther Explication appear; if copiously, it is yet possible, say they, to extend it further upon a short Basis; and on either hand it will be pronounc'd imperfect by such Zoilus's: Let these Persons appear and shew themselves, under their own Colours. I believe therefore, an inexhaustible Subject will afford Room enough for the whole Faculty to descant on. The Rules of Art themselves, on which Fevers depend, are numerous; but the Complications become infinite. It is easy to know, whether an Author offends against those Rules, if the Reader be vers'd in them; but it is not easy to conceive or say, whether he has included all that depends on those Rules; for

if the very Rules themselves are conceal'd from their Knowledge, they can be no Judges of the Complications ; and a few Particulars will inform us how deficient many are in these very Principles.

I shall enforce the former Paragraph, by hinting at a few Particulars, which are too little known, or however observ'd : There is not a greater Mischief happens in Physical Treatises, than the Graphical Description of Diseases, as they are managed by the Students. I am very well appriz'd, how much I shall be thought to be mistaken ; but if we examine the Works of an Author who excels in such Descriptions, we may soon be satisfied in the Matter. Dr. Sydenham is very particular in giving a Detail of every Disease ; he tells minutely what happens, but there is no Provision made to distinguish the main Signs of the Disease from the common ones ; where the Characteristicks are buddled among the fortuitous Signs, and the unwary are left to believe that whole Detail absolutely necessary to pronounce his Patients to labour under that Disease ; and it is not much to be wonder'd, that young Practitioners should be of this Sentiment ; but I am afraid

fraid this laborious Error spreads among those of more Experience, when we find some believing a hard Pulse to be a Pathognomonick of a Pleurisy, and the Redness of the Cheeks an inseparable Sign of a Hectick Fever; whereas such Signs only denote the Presence of the Disease, as are never wanting in it: All others are term'd common. These Descriptions therefore which are too minute, without proper Distinctions made, do, like ignes fatui, lead young Gentlemen out of their Road; and the main thing they aim to instruct you in, is put quite out of View. So that one of the principal and first Marks you level at, is render'd impracticable; if then you can't come at the Knowledge of the Disease, you stick in the Threshold, and you never can enter into the Cause of what you have no Idea of; and consequently the Cure will never succeed. I would not have said so much on this Affair, if I were not sufficiently convinc'd, that I have laid open a severe Truth.

To such Men the Rules of Art before-mention'd are of no use; for if the Knowledge of a Disease or Diseases, when there are more than one, is an invincible Myste-

ry: The Cause and its Cure must of Consequence remain Secrets, and then their whole Scheme is Ideal; nor is there any assignable Proportion between the Expectations of such Practitioners, and complete Masters of the Distinguenda: However necessary these Præcognita are to Practice, we are yet in the Dark, if we pretend to dwell there; for a stated Method of curing any Disease, is a vulgar and dangerous Error; take the Case in this Prospect, and Dr. Sydenham's, Willis's, Riverius's, and all the Works yet publish'd on Diseases, are a Series of Errors; but aphoristical Authors are in a more particular Manner too absurd, to be follow'd; for as there is the same Uniformity in Diseases, as in Faces, a Disease with its individual Symptoms, requires opposite Cures in distinct Patients. Of what Authority then is Dr. Sydenham, or any greater than him, if such an one there be, to a reasonable Practitioner? Books of Physick appointing certain Methods for certain Diseases, are not to be confided in for our Guides in Practice; because where such Authors would themselves recede from their assign'd Methods, we have no Reason to stick to them: And who is so stupid to imagine,
that

The P R E F A C E ix

*that a Jaundice must always yield to an Aperient Apozeme, to Cholagogues, and Tunbridge Waters, as Sydenham * has wrote; when Bleeding is sometimes so necessary, that the aforesaid Remedies of Sydenham would equally destroy your Patients, as the Neglect of Bleeding would suffer them to drop? There are other Jaundices then, which are pass'd over in Silence in This renown'd Author, and that Disease is too equivocal to depend wholly on his Authority for its Cure: Let not my Readers say I act invidiously against renown'd Authority; no, I revere the aforesaid Author, and admire his Judgment; but altho' he acts candidly and judiciously in all his Practice, and directs you punctually as to what Methods are to be pursued for that particular Case, yet it is a Mistake, that you foist upon him, to suppose he excludes other Circumstances, which would have made him change his Sentiments also. His Indications never were precarious, but were founded upon stable and real, not imaginary, Rules: He look'd too narrowly into Signs and Symptoms, which betoken'd the Causes in Action; and from thence he built up his Method of Cure: This was com-*

* P. m. 180.

mendable

commendable in him, and worthy of our Imitation; for as each Cause has determinate Signs to manifest itself, if we are capable of discerning them; we cannot err, if we rightly comprehend them; and indeed they are mostly the Objects of our Senses: If there is any Ambiguity in them, and there often is, we are not left however without Means to steer our Course by.

To all these we must add, how great a Necessity there is for a Practitioner of Physick to be well vers'd in every Head of his Business: He may know the Disease, and its Cause, and yet many Particulars in the Cure may be conceal'd from him: If this can be true, he is incapacitated from acting in Fevers with Conscience. The Extent therefore of Knowledge in a Practitioner must be very great, if he undertakes to practise in this Disease. Its Symptoms are quick in their Motions, they have double and treble Causes to enforce them, and no Time must be lost in their Relief: Repeated Inculcations are no where more pardonable than in what relates to them.

Were the Case in Dispute an irregular, Bent of the Spirits towards any Part, so as to produce Convulsions; suppose the left
Side

Side were convuls'd, and Revulsions were to be made, the Question wou'd turn upon this Hinge; namely, where ought we to begin; for as it is a stated Axiom, that we must revulse to a distant and contrary Part, it is easy enough to know what is a distant Part; but in the present, and all Nervous Cases, it is not readily determinable what Part may be call'd contrary: What if at length the Part affected shou'd be deem'd the contrary Part, to which our Revulsives shou'd be apply'd? This bears the greater Resemblance to Truth, in as much as it is more than propable, that all our Nerves decussate from the Olfactory themselves, down to the very Cauda Equina; that is, the Nerves of the right have their Origin in the left; and, vice versa, those of the left spring from the right Side, whether in the Brain or Medulla Spinalis: So that if a Palsy siezes any vertebral, or a set of vertebral Nerves on the left, the right Side, so far as that Range of Nerves reaches, becomes paralytick; and if we suppose this Disease to arise from an Oppression of Blood on the Nerve, or on a Fulness in the Artery compressing the Nerves, then the Side affected is the contrary

trary Side ; because the right Vertebrae, compress'd in their Origin, deprive the left Side of its proper Influence from the Nerves, and Bleeding ought to be perform'd in the left Arm, if we wou'd revulse : The apparent sound Side therefore in nervous Cases, is really the opposite or contrary Part, where Revulsions are to be made to : If Revulsions then are not merely titular, and both Reason and Experience have prov'd they are not, we are led into a Circumstance, by the bare Knowledge of Anatomy, never before publish'd.

There is another Remark well worth your observing, and which I don't perceive has been as yet regarded ; namely, as Revulsives are only to be made at a Distance from the Part affected, it wou'd seem preposterous to postpone them to Derivations : Not to enter too far into Dispute, it is universally agreed on, that Derivatives are to succeed Revulsives, as surely as particular Evacuations are to follow Derivations : And yet Practice subverts the Scheme, which has never been disallow'd by any but ignorant Men : Or why do we apply Blisters first to the Neck, and often to the Head in delirious Cases, where the
Brain,

Brain, the Seat of the Symptom, is too turgid, with Humours of a very acrimonious Nature? Were it not more advisable to begin at the Legs, and gradually to ascend to the Head? How often have I reliev'd dry Asthma's and Pleurifies with Blisters to the Legs? Have I not experienc'd them of great and sudden Use in Fevers with low Pulses, gentle Heat, Diarrhœa's, and other threatening Symptoms, apply'd to the Calves of the Legs? And they who will hearken to Reason and Experience, will find their Account in this Method.

I have another Observation to add concerning Revulsives; to wit, some of them are lasting, whilst others are only temporary: The former are Blisters, Setons, and the like; and the latter are Bleeding, Cupping, and some others: The former continue their Effects for a long Time, and must be repeated seldomer, and are to be apply'd in larger Quantities; but the latter must be used more sparingly, and repeated oftner. Therefore,

I shall take the Liberty to annex one Remark more retaining to Revulsions, which is disregarded in Practice, and
which

*which is yet founded upon the most reasonable Basis, that the Circulation can afford : We are all well appriz'd, that many Deliriums depend on too plentiful an Afflux of Blood towards the Brain, and Dissections have given us plain Proofs that this is too often the Case : It cannot be wonder'd at, that the great Hurry the Blood is in, should convey too much to these Capillaries, and overstretch them ; after which the Blood stagnates, or is some way obstructed ; and the Brain is moved too much, and overcharged : Now as Revulsions are properly levell'd at a Prevention of too great an Afflux of Juices, before they are too deeply rivetted, then in Deliriums, and other Disorders depending on such a Hurry *, a Ligature made on each carotid Artery, so as to straiten them into an ordinary Capacity, will effectually prevent the too great Afflux of Blood to the Brain ; meanwhile, are we to labour at other Means proper for this Purpose ; and this Sort of Revulsion has this Convenience attending it, which we cannot say of most others ; namely, it does not at all weaken the Pa-*

* See the Subject on the Hæmorrhage;

The PREFACE. xv

lient, it is only troublesome by reason of the Straitness of the Ligature. Has not the like Practice obtain'd in Surgery heretofore, as an Interceptive in customary Defluxions? where, for Example, you have cured a Patient of any Tumor, and upon the least Emergency, this Swelling is apt to return; then, as the Largeness of the Artery is the Occasion of such an Aptitude to swell, it is reasonable to straiten it by a Compress and Ligature, yet so as not to obstruct the Circulation quite: This Stratagem has been found much more effectual, by such as have practis'd it by Advice, than all the trifling interceptive Plasters, whose Effects are somewhat dubious: Much more may be said on this Head, which shall be deferr'd till a fitter Opportunity.

There are so many Particulars worth Observation on this and other Heads, which have slipt common Notice, that it would take up more than a Preface to make an Index of them; without the full Knowledge of which however, no Man can properly be said to be a nice Physician: And this Art is of so large an Extent, that Improvements are still made by its Professors by daily Experience; so that to denominate
any

any Man a perfect and nice Physician, is so relative a Compliment, that it is only saying he knows all the Rules of Art that are yet discover'd; for too much, God knows, lies yet conceal'd for future Ages to lay open, which is the Work of Observation, and therefore of Time. Wherever we are left without any Rule to steer by, Reason is our Guide; if that succeeds, it ought to be recorded as observ'd, and is to be reduc'd into a Rule for Practice.

I fear we are often too positive in giving in our Reasons for Effects, which we know more surely than we do their Causes; and I shall instance in the Bark, which we are well enough assur'd takes off a Remitting or Intermitting Fever; but we are not so well acquainted why it does so: We generally believe this Calm to ensue from the Bitterness and Stypticity of the Bark; but we are not sure, whether the Resin of the Bark does not contribute towards the appeasing of the Commotion rais'd in the Blood; for as we learn by Experience, that Struggles are rais'd by blending concentrated Oils and Acids together, we learn by the same Means, that if to Bodies, thus put in Motion, we add enough of Oils or Resins,
the

the Commotion ceases in an Instant : Thus to Dough fermenting throw in a little Oil, the Mass ceases to elevate ; to Beer working in the Vat, it is customary for Distillers to throw in some Jalap Root in Powder, a little before the Excisemen gauge it ; this makes the Vat subside considerably, and the Liquor ceases to ferment any further, and thereby they deceive the Gaugers. If you add Lard or Oil to Liquors under Fermentation, they work no more ; nay, if you put Jesuits Powder to Ale whilst it is working, it stops the Fermentation : Perhaps in the same manner, the Bark thrown into the Blood under a preternatural Commotion, checks it, and a Calm ensues, or perhaps it works both by the former and this latter manner ; and probably the fix'd and volatile Salts, which the Bark contains, do so castrate the Resin, that it does not work downwards, which however it often does in some.

Let us be sure of the constant and characteristic Effects of Remedies, and then let us reason suitably to these Effects : It matters not whether we reason according to the Chymical and Mechanical System, or according to a mix'd Scheme, so they hold

good in all Points. Let Mechanists say what they please, we stand oblig'd first to Experiments in Chymistry for a large Share of our Knowledge in Physick; and when it is affirm'd that certain Effects, produc'd in our Bodies, depend on an Acid, nothing more is understood, than that such a Principle is the Occasion of all our Ills; now none is so fool-hardy as to deny there are Bodies quam proximè Acid, which have stated and regular Effects upon our Fluids and Solids; namely, they congeal our Blood, they cool and even chill us, they stop Putrefaction in Ulcers, they prevent and cure Drunkenness, they restore our Appetites, they suppress Sweats, cure bilious Colicks; they prejudice hysterical Persons, produce and increase Pains and Stranguries, and are prejudicial to some Coughs; they cicatrise Ulcers, and stop Bleedings: Now why they have these Effects must be discuss'd in a Mechanical Way; wherefore as that is done by having regard to the Figure, and other mechanical Affections of this Principle, we both agree; for as an Acid is understood to consist of hard, firm and penetrating Particles, they are heavy, attractive and active; they are elastick and soluble

luble in Water ; they attract Oils and alkaline Salts in certain Degrees, and these Properties they possess by reason of their Figure, Gravity, and other mechanical Affections, not because there is a fancied Contrariety between certain Bodies ; for Example, between Oils and Acids, or between Acids and Alcalines ; and thus we quarrel infinitely for want of understanding one another : Old Terms don't include necessarily a Misunderstanding of the true Principles ; we may then keep the Terms, and yet mean anew : There is too much real Improvement to be made in Physick, we need not brangle about Trifles ; and it is much to be suspected, because it generally so happens, that such as busy themselves about these Out-works of Physick, have nothing solid to propose to us.

*I have said little or nothing in these Sheets concerning the Manner in which a Fever is produced, my Design being, as is said above, to relate Cases only as they occur'd, without adding Names ; and by so doing, to extend the use of my first * Essay on Fevers, which may afford a greater and larger Descant as Occasions offer : So that*

* Criticon Febrium.

these Paragraphs are, in Effect, Histories; but not deliver'd as such, having judg'd it more concise and instructive to deliver Observations in a cautionary than an historical Method.

As to the Cause of a Fever, the less intricate and more simple it is supposed, the more likely will it prove; and we need only shew, that in such a Case the Juices are render'd more sharp and deprav'd, to answer all the Ends we propose, and to account for all the Symptoms and the Methods of Cure: Wherefore, give me Leave to insert a few Postulata.

- 1. The Blood is render'd acrimonious by Retentions or Additions.*
- 2. The Moment of the Circulation is in a Compound Ratio of the Celerity and the Magnitude of the Pulse.*
- 3. The Magnitude of the Pulse is in a direct Ratio of a just Rarefaction of the Blood, and its Quantity.*
- 4. The Celerity of the Pulse is in a Ratio of the Acrimony of the Blood.*
- 5. Neither the Celerity of the Pulse, nor the Quantity of Blood differ in the various Fevers, but the Moles differs.*

6. *The Arteries may be compress'd to a certain Degree by the Nerves surrounding them.*

7. *The Density of the Blood is in an inverse, but the Rarefaction in a direct Ratio to its Moles.*

8. *Too great a Rarefaction or Density destroys the Circulation of the Blood.*

It is very evident, how an Excess of the Mass, circulating thro' the Vessels, destroys the Circulation; since if the Blood be impell'd into the Capillaries with Force, it distends them too much; the Consequence of which is the Loss of their restitutive Force: When Matters arrive at this Height, the Force impelling is not yet impair'd, but the Resistance at the Capillaries is destroy'd; all therefore that is sent thither, is received without Return; the Part, and Parts adjacent, are over-charg'd; and at last a Rupture of the Vessels ensues, the Blood is extravas'd and lodg'd, the Functions of the Organ, on which the Blood is spilt, are abolish'd; and if this Scene be acted on any Organ, on whose Action Life depends, the Play is over. Suppose the Brain were under these Circumstances, the Person affected would turn Lethargick, and too rapid a Cir-

a 3

culation

culatation would inevitably overwhelm him ; for in this Case the Glands would be oblig'd to receive Blood in lieu of Spirits, or would be so compress'd, that no Spirits could be separated, which two Things differ not in the Effect, tho' they do as to the Cause, but either way the Heart would want Supplies, and the Circulation would be lost, or Death would ensue. We ought not to wonder then, that we find Lethargicks dying with strong Pulses, till the Moment their Agony begins, for then on a sudden it fails: I believe you will not find this Remark of Rhodius's any where accounted for ; but as there are certain Limits allotted to the Elasticity and Resistance of the Fibres of every Individual, and none can know to what Degree a Vessel will stretch before it breaks : There are also certain Degrees of Motion beyond or below, which Nature cannot subsist without being oppress'd or starv'd ; whenever therefore we find a Distemper dangerous in its Motions, we must give a strict Eye to the Circulation of the Blood, and must keep in Mind, that as too rapid a Circulation can destroy, so we must be cautious how we deem a Patient in no Danger, who has a strong Pulse ; for strong and good don't coincide here, inas-
much

I

much as the Strength of it is the Fault : And as Lethargicks generally have strong and great Pulses, and yet die under them, we must be oblig'd to say, that in that Case the stronger is the Pulse, the greater is the Danger that threatens ; however this Comfort attends, that Discharges may be made the more freely, if we are call'd before the Extravasation be begun ; and as it is not easy to know whether this Accident has befallen them, we must however be free in making the proper Discharges. The want of Success only confirms us whether this be the Case or no ; for it is very probable, if there be no Extravasation or no Damage done to the Brain, that the Evacuations will have their wish'd-for Effect ; but if that once be completed, the Patient will die of Course ; so that Discharges are all the Chance that remains for the Preservation of Life ; and Bleeding in Case of a Rupture is but taking the Contents out of a Carcass. I shall not here descend to more Particulars, which would naturally follow from these Postulata, for my Design is not to swell a Preface.

Thus from these few Principles, branch'd out into various Particulars, it were very easy to account for all that happens in either

Sort of Fevers ; but as I shall make them appear evidently in the LECTURES that will be publish'd, it will be needless to insist further on them here ; only it may be observ'd, that some new and more just Indications may be drawn from these Principles, which have not yet obtain'd in publick Practice, which however have succeeded, as will be spoke of in a proper Season.

Having cull'd out of many Heads, some few Observations not thoroughly consider'd, it will appear how lame vulgar Practice must be deem'd, when it only depends on Particulars ; and how little particular Practices can be depended on for the just Cure of even a common Colick ; since scarce one Individual is found to be seiz'd with the numerical Signs of another, and since the least Variety unheeded changes the whole Scheme of Cure : We may then justly say, that the vulgar Practice is merely casual ; and it is odds, if no other Methods are pursu'd, but what are dictated to us in Practices of Physick, tumbled over by the Generality, but we may meet with Prescriptions in a Consumption, proper only for a malignant Fever, or the Reverse ; and

what

what just Reason would there not be for Complaint, if he who labours under the severest malignant Fever, should be sent into the Country to ride and take the Air; what has happen'd cannot be reputed Chymical; and if such Mistakes are committed by Æsculapii, what may we not expect from the less Expert! These Errors in them could only be an Inadvertency for want of Time to examine narrowly into the Matter; but in others it must have been invincible, from the want of a right Education, and could never therefore have been amended.

*There is another Particular well worth Observation, namely, a Disease becomes very hard to be known, when Mismanagements have preceded: If Diseases are left to Nature, they are often imperfectly cur'd, and a less Disease succeeds a greater; as to this Point, you will find Instances enough in Hippocrates, and they are readily guess'd at; but where preposterous Methods have been made use of, the Task is so difficult, that it is even impossible to foresee: We must compare the present with the preceding, and find out how much of the former remains, and what Additions have been made
by*

by the Errors committed: A strict Enquiry into the Order of Invasion is very useful in this Case; by this Diligence we become Masters of what was, and of what is; we discern what Deviation there is, by knowing what would have been the genuine Issue, if the Disease had been regularly treated, or had been left to Nature; and how great must this Mistake committed be, when we are perfect Strangers to either?

How few Enemies soever you design to raise, it will always be your Fate to acquire some; but I wish they may never exceed the Rank of a certain Compiler of a Physical Lexicon, who, whilst he set up to instruct others in the Sense of Words, was compell'd to acknowledge he was not vers'd in the Language he pretended to explain; and taking upon him, among many other impertinent and obvious Errors, to explain the Word Euodia, he display'd his Ignorance in the very manner that could have been wish'd for: First, he finds out that it came from εὐωδία, somewhat sweet-scented, which Hippocrates had made mention of; then he tells you very seriously, that the Word and Book were both whimsical and unintelligible; but upon Enquiry, and pressing the Question too
hard

The P R E F A C E. xxvii

*hard upon him in a private Conversation before Witness, he was oblig'd to confess he neither understood Greek, nor had ever read the Book, and would retract his Error in the next Edition : Thus the memorable Quincy ! Whereas the Word and Matter are the Term and Subject I was much oblig'd to the Ancients for. Jonston in his Idea calls it *εὐοδία*, and Fernelius and Riolanus the *Methodus Medendi* ; who quarrels then with either the Word or Matter, is ignorant of both ; and I am determin'd such a Person, if I can think, shall never assist me in Extremis.*

I make the same Protestation here, as I have done elsewhere, that if I commit any Errors, they are not voluntary, and I will make no scruple to retract them upon Conviction ; let not any one however imagine, that I am under a Mistake, if their Sentiments disagree from mine, because it may require canvassing to prove me in an Error, since I have not advanced any thing which I have not good Grounds for ; but Obstinacy has too great a Mixture of Folly for a Man of Honour to espouse it, and a Man of Sense looks greater for yielding upon Conviction.

If

xxviii The P R E F A C E.

If the Art of Physick is to be advanc'd, no Discouragements ought to be given to the Undertakers thereof; let each Person of Industry draw out his Scheme, if it fails, he has at least shewn his good Will, and prevents any other from steering in that Road; but if he succeeds, he merits Glory and Thanks. The greatest Service that can be done to so noble a Profession, is to attempt at Criterion's of the Causes of Diseases; I am so much appriz'd of this Difficulty, that were it now set upon, the greatest Practitioners wou'd not complete it in a couple of Centuries: I am afraid I may not be thoroughly understood, and therefore I will give some Instances, setting my Meaning in a clearer Light. In general, we are first to suppose the Fluids disorder'd, because as Persons do frequently recover of Illnesses, and the Fluids are readily corrected, they are imagin'd in Fault, and, to say the Truth, they are more often disorder'd than the Solids; or we shou'd more seldom meet with Cures perform'd: Diseases then of the Fluids yield more readily, and confirm'd ones in the Solids do seldom yield. These are Truths which all know; but altho' we may find
which

which of the two are in Fault, it is not easy to pronounce what numerical Causes affect either: As Diseases, ever so simple and uncompounded, are a Complex of many Causes affecting our Functions in peculiar and various Manners, so 'tis improbable to meet with a Disease made up of one single Cause; and tho' one Remedy does often answer our End, yet it cou'd not effect this, if it did not answer more Purposes than one: A Pleurisy is an Inflammation, and most do think it sufficient to know that it is so; and thus do they draw off Blood in large Quantities, and believe, they have done all that is requir'd of them, if even the Patient sinks: But I am far from being of their Opinion. What Bounds do they prescribe to this Evacuation? Or, what is it that regulates this Discharge? Are there no Scruples to be proposed about the Part affected? Do they pay no Regard to the Time or Season of the Disease? Are there not essential and eventual Symptoms in this Distemper? Is there not some Regard to be had to the Irritation? or to the Expectoration? or perhaps to the Matter adhering? I have a great many more Queries to be answer'd concerning this one particular

ticular Distemper, which will convince any moderately skill'd in the Art of Physick, that the Indications are not to be satisfied, by barely pronouncing it an Inflammation, and by drawing off Blood, and keeping cool; perhaps I shall be deem'd too scrupulous and nice in my Inquiries, and too minute in Particulars; but if Life is at Stake, and Experience dictates these Scruples, or Omissions have prov'd of bad Consequence, who is that Patient that will complain you have taken his Case too much at Heart? And I will affirm, that in the ordinary Method of proceeding by the Gross, the Recovery of most Patients from a Pleurisy is merely casual: And the principal Mistakes committed usually, are at the first and middle Stages, which relate principally to the Discharges to be made.

If there be such Difficulties to be encounter'd with in a Disease so well known as is a Pleurisy; what must we say of Distempers more compounded? What Compassion ought we to have for young Gentlemen educated in so perfunctory a Road, as is practis'd in our modern Instructions? They labour industriously at Anatomy and slightly run over Chymistry, and they
are

The P R E F A C E. xxxi

*are then admitted to see Patients blood-
ed, vomited, purg'd, blister'd, or saliva-
ted; they see Pills, Bolus's, Tinctures,
Infusions or Julaps prescrib'd for cer-
tain Distempers, whose minute Differen-
ces, or whose Essences and Incidents are
not at all open'd to them: If then there
shou'd any forbidding Circumstances occur
in their own private Practice, which they
never saw whilst under Direction, what
Anxieties of Mind are they not under?
I must therefore repeat it, that particular
Practices are dangerous, and not at all in-
structive; to follow this Method, is to be-
gin where they shou'd end. Far otherwise
do Divines and Lawyers commence their
Studies; because they never begin with Ca-
ses or Reports, but deal for some Years in
Generals, before they descend to Particu-
lars; the general Reasons of Things ought
to precede Examples: And an Analogy of
Examples being the utmost Extent of such
Mens Knowledge, it must needs be weak and
slender, from the Variety of States in the
Fluids and Solids, which are always fleet-
ing, and never stable, and which seldom
produce univocal Cases: And then Persons
so*

xxxii The P R E F A C E.

so lamely bred up, as I have just mention'd, are puzzled in all their Actions; an imperceptible Variety baffles their Endeavours, they flounder in Difficulties, and e're an expert Physician can be had, the Patient drops unexpectedly for want of a masterly Discernment: And well may slow and weak Men fail, when the brightest Genius cannot extricate himself from such Difficulties, by Reason of this his preposterous and narrow Education. And it were not quite so blameable, if some Persons of Distinction did not give Encouragement to so low a Method; because proceeding against Conviction, they advise this, and discourage all other Instructions; such has been my Method, let yours be such too. It is much to be fear'd, that Physick thus manag'd, will at last dwindle into mere Charlatanery: At this Rate, good Things formerly in Use will be neglected, and new Inventions will sink: A Self-sufficiency and Obstinacy will obtain, and our Art will droop. Not so the Ancients.

Ite nunc fortes ubi celsa magni
Duxit exempli via, cur inertes
Terga nudatis? superata tellus
Sydera donat.

Practical

Practical OBSERVATIONS
ON THE

Epidemical FEVER,

That has Reign'd for these Two
YEARS past, &c.

HAVING some Years ago publish'd
a small Treatise on Fevers, and their
Cures, I hope it will not be taken
in ill Part, if to that Subject I make some
farther Remarks, in that casual Order they
occurr'd to me in Practice; for they require
no Order. These Observations serve to il-
lustrate what I have advanc'd in that Trea-
tise, and are so many Histories annex'd to
it.

IN some who have had this Fever in a
dangerous Manner, Shiverings have been
observ'd thro' the whole Course of the Fe-
ver; and I found it remarkable in one who

B

had

had *Petechiæ* and a *Rash* also upon her ; but what is most strange is, that they feel hot to the Touch, whilst they complain of Cold themselves : A critical Shivering appears but once ; but this returning so frequently, shews a permanent Cause lodg'd within ; and as Shiverings are but the Effects of Irritation, it appears the Blood is full of Salts, which stimulate the Fibres of the Muscles into Convulsions ; and Fevers are easier or more difficultly cured, as the Juices are less or more deprav'd. It is certain then, that we must be very diligent in such a Case ; we must watch every Turn the Fever takes, every minute Symptom must be attack'd, the Remedies must be thrown in plentifully ; we must not however load the Patients with Weights of Cloaths ; the Nature of the Fever must be found out, if not a *priori*, at least a *posteriori* ; and in order to this Discovery, the tentative Method is the only one that young Practitioners have to rely on ; I mean, they must try whether Volatiles, or what kind of Remedies agree best ; and the same must be observ'd as to their Diet.

IN the Beginnings of Fevers we often find the Pulse unequal, but mostly small ;

it is a Discouragement to young Practitioners, when they see a plethorick Person in a Fever, whose Pulse is small, they wou'd draw off Blood, were they not afraid that the Pulse will not bear this Discharge ; and this Perplexity is heighten'd whilst they are under an Apprehension of the Small-Pox ; for tho' Evacuations are universally approv'd in beginning Fevers of any Kind whatever, yet if contrary Indications appear, young Physicians cannot prevent their Fears : Wherefore to abate their Doubts, I shall give some short Cautions to guide their Judgments. In general, small Pulses in the beginnings of Fevers are *oppress'd* and not *depress'd* ones ; wherefore if any Symptom requires Bleeding, such as Pain of the Head, of the Back and Head in the Small-Pox, a full Habit of Body, a Quinzy, a Peripneumony, Inflammations, Pleurisy, great Giddiness, troublesome Catarrhs, and the like : I say, if any of these, or other grievous Symptoms afflict the Patient, it is necessary to draw off Blood, for as soon as the Quantity is abated, the Fluxion also is lessen'd, the Symptom is taken off, and not only does the Pulse grow stronger, but the Fever encreases ; this is

4 *Practical Observations on the*

experienc'd in every Day's Practice; the Reason of which appears to be an Avocation of the Liquid of the Nerves from their Duty in the Heart, to the Parts afflicted with Pains and troublesome Sensations, to which they are hurried with a good deal of Impetuosity, and not a real want of it; and moreover in such a Confusion, it may happen, that the Nerves of the Heart are contracted and convuls'd, which Contraction straitens the whole System of the Arteries, and hinders their Expansion or sufficient Dilatation; but as the Pulse is at this Time unequal, that is, sometimes small, at other Times great, especially upon Remission of the Symptom, it is really an *oppress'd Pulse*, and argues a Quantity of Humors, which the Spirits cannot rightly circulate, and which therefore ought to be drawn off; and moreover, where we find that nothing preceded the Fever that has weaken'd the Patient, we have just Reason to answer any Indication requiring Bleeding: Natural Discharges of Blood, whether by the *Hæmorrhoids* or *Menses*, having run their Course just before a Fever commences, are no forbidding Circumstances, where the Symptoms require Bleeding; for these being

ing natural, we may as well omit it upon a natural Discharge of Urine or Stools, which to any mean Capacity must appear a ridiculous Apprehension ; I would be rightly understood, and therefore I repeat it, that natural Discharges don't hinder Bleeding ; for so long as they keep within the Bounds of Nature they are beneficial ; if indeed they are immoderate, and such as the Patients have not been us'd to, then the Physician must inquire how much they did exceed, and must either omit Bleeding, or abate in Proportion to their Excess : And as to the Quantity to be taken off, we are to weigh well, whether it will contribute to a total Eradication, or whether there be any further Consideration, to which the Discharge must be proportion'd : In Fevers, Bleeding only eradicates the Symptom, but not the *Disease* ; *this* must be treated in another Manner ; the Symptom being only a Part of the Disease, Bleeding is a partial Cure. All Fevers have or ought to have their *Crisis*, and each has its peculiar Port, by which the morbid Matter will or shou'd pass, when it is rightly prepar'd and digested ; for Example, the Small-Pox, is, or ought to be thrown into the Skin in Pus-

6 *Practical Observations on the*

tules, the Measles in Spots, the Plague in Buboës or Sweats, Fevers in Sweats or Diarrhœas, and so forth; and as this Crisis is perfect, or ought to be so, it takes off the whole Cause; Bleeding then, (and the same must be understood of any other Discharge) is not fitted to take off the whole Cause, it only takes off some Impediment to a regular Circulation; which being done, the repeated Rounds, the Blood takes in the Vessels, attenuates it to a certain Pitch, the Fever abates, the morbid Matter grows heavy, the Juices themselves grow thinner, and suffer this deprav'd Matter to settle thro' proper Emunctories; or Nature throws it out of the Body, and the Patient, who before was toss'd in a Storm, as it were, becomes calm, all Symptoms cease, the Fever goes off, Sleep and Appetite return, and Health is recover'd. So that we are so to proportion our Discharges, as only and barely to take off the Symptom, and then we leave Nature to herself, or assist her, to accomplish her critical Efforts: In which we ought to follow the Bent of Nature; that is, if the Matter be thrown off by Sweats or Diarrhœas, or by any other Discharge, we must only be Spectators, till the

the Fever goes off, upon Condition that too much be not excern'd.

A Physician may well enough distinguish the Nature of the Fever by the Pulse, altho' he shou'd neglect other Symptoms or Appearances; but he will be more accurately inform'd, if he takes Notice of every minute Accident: For Example, we know well enough by the Pulse, whether the Fever be slow and malignant; but if we observe the Patient's Breast, and perceive *Petechiæ* there, we are then more assur'd, that the Mixture of the Blood is very unequal; we are in our Inquiries then, to have a particular Regard to any Prejudice done to the natural, vital, or animal Functions, because we will then be acquainted with all the Disease, and we shall know of what Nature the Disease is much better, and be able to make a surer Prognostick, as well as to ascertain the Nature and Quantity of the Remedy: The Pulse may be as low in a common Malignant Fever, as in a Petechial one; but when we perceive *Spots*, we are well assured of the Degree of Depravity, of which we are not in the other Case. They shew, as Physicians term it, the *Quantity of the Cause*, and consequently direct

8 *Practical Observations on the*

us both in the Prognostication, and in the Doses of the Remedies to be given or apply'd: So that tho' the Pulse will inform us of the Blood's Motion, of its Quantities, and of the Quality of Blood, yet we are to inspect also into other Functions, to discern how greatly Nature is deprav'd: It is therefore one of the first Inquiries made by Physicians in Fevers that promise ill, to look upon the Patient's Breast, to see whether there be no Spots there, which help them to pass a more certain Judgment: For as it seldom happens in such a Case that Nature makes any Efforts for herself, which we know by daily Experience, there seldom happens a *Crisis* in such a Fever; and therefore we ought not ordinarily to expect it: Our common Method then is to make a Trial by gentle Means, proper for the Case, whether they will put the Blood upon attempting a Separation of the morbid Particles or no; if not in a reasonable Tract of Time, then are we to trust no longer to such feeble Measures, but, almost without Discretion, to proceed to Extremes, in order to keep the Blood's Motion on Foot, which will inevitably otherwise stand still; nor must we defer these Measures too late, since
every

every Hour advances these Concretions egregiously : I speak of such Petechial Fevers, as we in *England* are mostly liable to, that is, the slow Petechials. *Dilution*, with warm and moderately strong Sack-whey, with Tea, with thin Mutton or Chicken Broths, with Water-Gruel and Wine, and such like are necessary ; for without *Dilution*, in a proper Quantity, no Fever will yield, even to the most accurately adapted Remedies ; because whether the Blood be too much rarefied or condens'd, Liquors, justly fitted to the Case, do render it more *fluxile*, either by hindring its turning into *Bulla*, or by dissolving the too strict Union of its Parts. Next to Dilution must we attenuate and stimulate ; wherefore let a sharp Blister be apply'd to the Pole immediately, which must be follow'd by more next Day, if we find little Advantage by the first, and these by more, if the next Visit affords no perceptible Amendment ; and so on, if the Pulse, Heat and Water, shew no Efforts made ; at the same time give inwardly *Pulv. e Chel. C. C. Lap. Contray. Lap. de Goa, Conf. Alcherm. Raleighan. Sp. & Sal. Vol. C. C. Sal. Armon. Sal. Vol. Oleos. Spir. Lavend. Julap. Perlat.* with volatile

tile Spirits; apply also *Emp. Solearia*, and all proper Stimulants to keep the Blood moving as long as we can, till it begins to part with its morbid Particles, which we must carefully regard: When therefore by such means the Blood moves better, the Pulse grows stronger, the natural Heat returns, and the Urine begins to subside, we must throw in a gentle Cathartick to move the Patient twice or thrice; and if it be necessary, and nothing contradicates, we must give a mild paregerick Draught made up with Syrup of red Poppies to allay any Commotion that may ensue and procure Rest; if the Sediment continues, we must repeat this Method at proper Distances; and thus shall we carry off all the Fever, and prevent any Relicks, which wou'd be apt to rekindle a Fever worse than the first in this Respect, that the Patient wou'd have the same Course to run over again, with a much smaller Stock of animal Spirits to manage it.

IT is a certain Sign of some Convulsion upon the Artery, when the Pulse is small and weak, for the Nerves surround them; and they being void of a sufficient Quantity of animal Spirits, grow dry and shorter;

so

so that the Arteries cannot be extended to any Pitch, wherefore they are in a Manner rigid, and cannot then be thrust outwards; such a Pulse feels generally hard under the Finger, and is called a *Convulsive Pulse*; it requires great Attention to distinguish it, and a nice Judgment to remedy it.

IF we would act reasonably in Fevers, we must have a great Regard to the Heat of our Body: This Heat is a Consequence of the Velocity of the Blood's Motion; and as this Velocity must be justly regulated, so the Heat depending thereon will answer, as it is encreas'd or diminish'd. To encrease this Velocity, we stimulate and administer Volatiles, and to lessen it, we give watry Liquors and neutral Salts, or even Acids. This being abated or heighten'd, we grow cool or hot. The Matter standing thus, we are to observe, that the *natural Heat* of the Patient is strictly to be enquir'd into in Fevers, whether that be done by a practical Observance of it, or by a graduated Thermometer or by Relation; for we are to keep them in such a Degree of Heat, thro' every Stage of the Fever, as approaches nearest to Nature: If therefore, it should happen to be below this *Standard*, all the Symptoms arising from

from thence will indicate attenuating, dissolving and heating Remedies; for Example, suppose a Patient, afflicted with a Head-ach, Delirium, Convulsions, or any other Symptom, with a small Pulse and little Heat, or Heat below what the Patient in Health was accustom'd to, as this Symptom depends on Stagnation, and as this is caused by cohering Blood; and this again, by Evaporation, or some heterogeneous Mixture. Stimulants and heating Remedies being level'd against the whole and original Cause, they must alleviate or cure the Symptom; for whatever is fitted for taking away the whole Cause, when justly proportion'd, must necessarily serve to abolish a Part of the whole. If Patients are seiz'd with inflammatory Symptoms, such as Phrenzies and Inflammations of the Lungs, or barely with Fevers, attended with a scorching Heat, or such as they never were naturally subject to, and should at this Season complain of Pains or Spasms, the Velocity of the Blood being much greater than in Health, their Heat by Consequence exceeds the natural in an eminent Degree; and is therefore to be abated by Bleeding, Gruel, Water, small Liquors, and every thing that arrests the Blood's Motion:

tion : The Standard then is Nature itself, to which we are to reduce the Heat of the Patient ; we are therefore diligently to find this out, for fear we exceed, or fall short ; or, however, in Default of this, we may reduce it to such a Pitch, as that no Symptoms remain ; for these are certain Tokens of an Excess in Quantity or Quality, (to which we may refer Motion). There are, however, certain Fevers where a small Excess of Heat is allowable, namely, in the Small-Pox the Pustules inflaming, added to the Heat of the Fever that threw them out, produce a greater Heat than would be allowable in any other common Fever ; for here a double Cause concurs ; the one from a Commotion arising from the *heterogeneous* Particles in our Juices, and the other from the *Pain* of the Pustules ; and altho' these very different Causes produce the same Effect, yet the Remedy answers to the Causes, and not to the Effect. *Opiates* are commendable and necessary in the Symptomatical Fever from Pain, but *Alexipharmacks* in that from the Heterogeneity ; and altho' we have not always Success in this Disease, yet it is certain that Art has as yet found out no better, or other Remedies, than what will
answer

14 *Practical Observations on the*

answer these two Ends: Hence, sometimes Bleeding, Emulsions, *Sal Prunel.* and cool Liquors, even the *Hydrogala Fulleri*, or *Tinct. Rosarum*, are advisable; and also Blisters, *Pulv. Lap. de Goa, e Chel. C. C. Margaritæ*, *Sal. Volat. C. C. Theriac. Andromach.* and such like, conduce very much to keep out the Pustules. *Venice Treacle* answers all the Intentions, namely, of expelling and alleviating the Soreness and Pain, and of procuring Sleep; and it is therefore much used in this Disease, if nothing greatly contraindicates. Dr. *Morton* in particular is fond of this Remedy, where the Patients have no comatous Symptom upon them; and were not his Reason for it somewhat precarious, he is much in the Right to cry up its Virtues; the Soreness abates of Course if we sleep, and the original Fever abates, if we promote Perspiration; and if this is promoted, or design'd to be so at a proper Season, whenever it does not ensue, some other proper Discharge succeeds it. The Salivation then will be promoted by it, because when the Blood is attenuated in a proper and convenient manner, if Sweats or Perspiration don't or can't ensue, some other Discharge is attempted by Nature. Thus
Opiates,

Opiates, as *Diaphoreticks*, repromote the Salivation, because the Pores can't perspire : Thus Dogs flaver, because they can't sweat.

WE are carefully to distinguish between essential and symptomatical Fevers ; for in the latter Case, taking off the Symptom, is the adequate Cure of the Fever ; whereas in the former, the Fever will be found to subsist, when the Symptom disappears : If, for Example, a Patient labours under a Pain in the Back, a Fulness and Distension of the Belly, which is not better'd by Glisters or lenient Purges, a troublesome Pulsation, and Pains felt between the Back and Belly, and a slow Fever ; this Fever depending upon an inflammatory Obstruction in the Mesentery, must be attack'd with Bleeding, with nitrous Medicines, and with Diluents ; we must make Use of Fomentations to the whole Abdomen to disperse the Matter lodg'd, and by these Means the Inflammation being greatly abated, and the Fluxion being quite allay'd, the Fever which was an Effect of this Inflammation vanishes of Course : But if a Fever having preceded, and having thrown off Part of its Matter into the mesenterick Glands, should be too freely treated by too large a Discharge of Blood ;

16 *Practical Observations on the*

Blood; we shall cure the mesenterick Inflammation indeed, but it will be a great Surprize to find that we have embarass'd the Affair, and hardly have left Spirits sufficient to work out a Crisis, which must ensue, or the Patient is cur'd of a Symptom and left to die of his Disease.

WHEREVER the Fever is prior, and by an unseasonable use of Fruit, or Cucumbers, a *Cholera* succeeds; it eclipses the Fever in such a manner, as not to be perceiv'd by vulgar Practitioners; nor are they appriz'd of the Matter, till they are amaz'd to find their Patients, recover'd of the *Cholera*, dying of a Fever. There is great Venom lodg'd in cool and unripe Fruit; they are sour and gummose, and hard to digest; they breed gross and unwholsome Chyle; they lodge long in the Intestines, and putrify there; after which, they exert their Force and stimulate strongly to Stools and Vomits. If Cold stops our Perspiration at the same time that these corrupt Juices act their Part in the Bowels, the Fever and this Disease may either reign at one and the same time independently on each other, or it may be a Symptom of the Fever: Be this how it may, their being coeval or subordinate does

not

not
must
the v
be k
cal,
time
ver,
ent I
to th
lera,
only
lera'
pron
them
rous
requ
lief.
save
vice
point
thod
affli
Fever
quick
first
thirst
at St
ing;

not alter the Method of Cure ; for both must be regarded with this Difference, that the vomiting and purging from a Fever must be kept within Bounds only, if it be critical, taking Care of the Fever at the same time ; but if it be independent on the Fever, we may boldly curb it, after a sufficient Discharge is made. I need not descend to the particular Method of curbing a *Cholera*, since Opiates and Restringtons are the only Requisites for the stopping it. If *Cholera's* alone be dangerous, what must be pronounced of Fevers accompany'd with them. In short, it is one of the most dangerous Symptoms that can attend a Fever, and requires both Haste and Judgment in its Relief. Few or none recover of such Fevers, save those who have consulted the best Advice in Time : But that none may be disappointed, I shall briefly rehearse the true Method of Cure, supposing nothing farther to afflict the Patient besides the Cholera and Fever. If you find the Patients to have a quick, frequent, tho' a low Pulse ; if they first shiver'd, or were chilly, and then grew thirsty and hot ; after which they grew sick at Stomach, and fall a vomiting and purging ; then it is evident, that the Fever preceded,

C

ceded, and that the Cholera is a Symptom of this Fever. Few Fevers attack us without indicating some Discharge; and if an Evacuation is attempted by Nature, we must look on for a while, till we judge a sufficient Quantity is thrown off; wherefore we make the Patients drink a Gallon or two of Chicken Broth unsalted, to encourage the Discharge: When we have done this, we are no longer to promote it, but we must give Cordial Bolus's made up of calcin'd Hartshorn, Coral, Crabs-Eyes, *Pulv. e Chel. C. C.* and *Conf. Fracastor.* as well as Cordial Julaps, in which *Opium* must be a chief Ingredient, in order to change the *Sharpness* of the Stomach into a *Mildness*, and to allay the *Spasms*, and to support the *Spirits*; these at first will not readily succeed, because the Tendency to the Bowels is great; and if, when the Vomiting is in good measure curb'd, the Purging should still follow the Patients, we must throw in Glisters of smooth Parts, especially of fat Broth unsalted; after which, we must add *Diascordium* to them, in order to complete the Cure; and when we have either quell'd the Evacuations, or so lessen'd them, that there is nothing to be fear'd from them, then

are we at Leisure to have a full Regard to the Fever, to bring it regularly to its State, and to a Crisis; which in general is done by testaceous and volatile Remedies, because such Fevers are mostly of the slow Kind, from the great and excessive Secretions that have preceded, and from the Quantity of Spirits lost upon such Occasions.

THE properest Diet for Fevers is thin Broth; because, if we give them too strong Broths, and the same may be said of Jellies, it is not diluting enough, it is a gross *Lympha*, and is hardly fit for keeping the Circulation on foot; whereas watry Liquors supply the Discharge of Perspiration, which is very great in Fevers, and yet support the Spirits: For want of a sufficient Quantity of Fluids, and by overfeeding with Jellies, the Blood becomes too dry, and turns cohesive: After which, we are to expect no Crisis, no regular Despumation; in the room of these we meet with Difficulties of Respiration, great Thirst, or dry Tongues; comatous Deliria, Lassitudes, Ischuries, Inflammations of every kind, Rheumatick Pains, Concretions, Extravasations, Lethargies, Paralytick Cases, Tremors, universal

20 *Practical Observations on the*

Weakness, pale Urine, weak Pulses, and an entire Stagnation of the Blood.

PERSONS are more or less subject to take Fevers, as their Fears or Constitutions determine them. Physicians are so accustomed to attend the Sick, that they are exempted from the Apprehensions common to all those who are not us'd to visit: And that they are seldom infected at all, they owe it to a Stroke of Providence; for they receive Steams of such different Natures into their Lungs, that one *Effluvium* is either a Remedy for another, or their Fibres are so accustomed to receive them, that they have no Effect upon them at all: It is possible enough to accustom ones self to any Poison, so as to receive no Damage by it; this is experienc'd among the *Turks* in taking of Opium, where a large Quantity of the *Massiac*, or most effectual and fine Opium, does them no Harm: Our own Climate has afforded us many Examples of this Nature; I knew a certain Lady who took at last one Ounce and a Half of Liquid Laudanum at a time, to alleviate her spasmodick Pains; another I was called to, who had been accustomed to take two Drams in a Day, and who cou'd not forbear its Use even when she

was dying. Custom in every Instance of Life produces an Insensibility : And I can't therefore but look upon it as a Stroke of Providence, that our Fibres should grow insensible of such dangerous Attacks upon them : And young Physicians ought to be very cautious when they begin their Practice, to use all the Preventives commended, till Custom has hardened them ; Liquors abounding with neutral Salts are the most eminent for this purpose ; wherefore the Elixir *Vitrioli* or Elixir *Proprietatis*, made of an acid Spirit, are not only recommended, but are of real Use in such a Case: The Blood upon the receiving *morbid Effluvia* into it, is wrought up to the same State the Sick was under ; but these Salts being taken down, hinder these irregular Expansions of the Fluids. It is reported by *Wedelius*, that a certain Count of *Germany* made use of an *Arcanum* to prevent the Small-Pox, which, he says, was a Mixture of Spirit of Harts-horn, and of Spirit of Salt : I need not expatiate upon the Reasons why natural Salts are the most likely to prevent Fevers, since they are so useful in them : I shall only add, that of these, the *Acido-salines* are the most beneficial ; because they lightly incrassate

the Fluids, and hinder them from falling into præternatural Commotions : I only advise a moderate Use of them, because to accustom our selves too much to them, we might produce Obstructions, and many other Inconveniencies ; when we prevent Putrefactions in our Humours, we do all that is requisite.

IT is somewhat remarkable, that upon Bleeding, we often find the Fever to appear more evidently than it did before ; so that if we would know whether a febrile Pulse is the Effect of a Fever, or some febrile Disorder, the Lancet frequently determines the Doubt ; for as an Oppression of the Pulse eclipses the Artery, so does it hinder those Occursions of heterogeneous Particles in the Blood ; as also the Vessels being render'd almost stark with too many Contents, the restitutive Force of the Arteries is diminish'd, and therefore the Blood is but weakly driven forward into them ; and accordingly the Heat that attends Fevers, is proportionable to the Attrition of the heterogeneous Parts against each other ; for as in the Case before us, the Blood moves slowly on, it grows thick of Course, and sticks to the Walls of the Vessels : This State
and

and Condition of the Blood is not at all fit to make the Patients hot, but on the contrary, they are cool, their Pulse is small, or rather oppress'd, their Heads ache, they breathe short, they feel an ulcerous Soreness, and heavy Pains in their Back and all over them, and Sicknefs as well as an Anxiety or an Oppression of their Breasts seize them; because as the Blood does not go briskly forward, it is apt to be deposited, and almost to stand still, wherever it goes; with this unobserved Remark, that the Blood *does not stop* in any other than the evanescent or lymphatick Arteries; whereas in the Veins it is apt to stop at the Valves, or even at any *Sinus* or Curvature: Witness the Case of an *Anxietude*, where Patients feel an unexpressible Trouble on the right Side of the Breast, which makes them restless, and causes them to conceive something hard to reside in that Spot; when it is the Reflux of the Blood from the Liver up to the Heart stopt at *Lowers Sinus*, which Impediment to Motion is sometimes so great, as to occasion a Fainting or Swoons, and for which we are oblig'd to draw Blood off, to give the most volatile Remedies, to hurry forward the Circulation:

tion: This Evacuation, namely Bleeding, has this Effect; when such a convenient Quantity is carried off as unloads the Vessels, they contract their Dimensions, and upon the *Diaſtole* and *Syſtole*, they take a greater Range than they did before, and conſequently compreſs the Blood more ſtrongly together; their elaltick Force being reſtor'd, they mix the Particles together more intimately, ſo that the Friction of the Parts among themſelves becomes infinitely greater than before; and the Heat depending on this jumbling together of the Fluids, the Fever therefore ſhews itſelf immediately upon ſuch a Diſcharge: But we muſt take Care how we proportion this Draught of Blood; for if we over-do it, we weaken the Spirits, and leave the Veſſels flaccid, and make the Caſe much worſe than we found it. Judgment is required to direct us in the Quantity to be drawn off; and if we don't draw off enough, we do no Service to the Amendment of the Lentor, nor can we with Safety adminiſter volatile and attenuating Remedies; becauſe if we do, the Conſequence will be the Rarefaction of the Blood, which indeed is the genuine Indication; and the Veſſels being already too full, they

they will be greatly distended, and we may endanger a Rupture of them: And this is so far from being an imaginary Fear, that I have often seen it happen upon such a Mistake; more especially, if the Patients have for any Time before been subject to Spit-tings of Blood, or any other customary Discharges of it. Thus have I seen Women subject to an overflowing of the *Menses*, or Men troubled with the Piles, who have been thrown into these Fluxes by such a Mistake in Practice; whereas, if a sufficient Quantity had been drawn off, a moderate Use of Attenuants produced no such Effects, but on the contrary, the Blood has been regularly circulated, the Fever has been gradually augmented from that Minute, the State of the Fever has brought on a regular Crisis, the Fever has terminated as it ought to do. The Beginnings well managed, give us a pleasing Prospect; but on the contrary, a small Mistake at the Beginning spreads into very dismal Effects, as one Circle, from a Stone thrown into a River, grows to a vast Extent and Number. As we have shewn, that Bleeding causes a Fever to appear, so we ought to endeavour to ascertain the Quantity of that Discharge, on which so many
good

good or bad Effects depend. When the Fever appears, it shews its Specifick Nature; if then, by the Largeness and Strength of the Pulse, as also by the Degree of Heat, it be of the burning Kind, or, if you please, if it be a sanguineous Fever, and the Patient be full and young, and any Symptom requires it, we may draw off by Turns, and proper Distances, from ten to twelve Ounces at a Time; and we may amount sometimes to near forty Ounces in some few Days, and yet secure a Crisis at last, by judiciously supporting the Spirits. It is true, this Quantity is not usually taken off in this Country, and great Caution must be made use of; for we must wait to see how each Bleeding affects the Strength and Pulse, before we attempt it again: If, for Example, an Inflammation of the Lungs follow a Fever, there is no doubt but we must without Delay draw off a good Quantity of Blood; and if, the next Visit, we should still find the Difficulty of Breathing, the Heat, and the Quickness and Strength of the Pulse, as well as of the loco-motive Faculty, to persist without any Diminution, tho' the Distance of Time should not amount to above six Hours, yet the first Quantity not having

suc-

succeeded, we must immediately order more to be drawn off; and this very Rule will hold for a third, and even a fourth Venesection. It is true, that in this Country the Fevers of this kind are more rarely met with, than in warmer Climates, and they Abroad are more lavish than we can be; but we even are seiz'd here with such heterogeneous Symptoms, as do require it; more especially when young People have fallen into Fevers from excessive Drinking of Spirituous Liquors; and if we are not very nimble in our Proceedings, great Hamorrhages ensue. Here also plentiful Draughts of small Liquors, sated with Saltpetre, are conducive to put a Stop to the too rapid Motion of the Blood: By this Method we prevent fatal Deliriums, which end in an Extravasation of Blood into the Substance of the Brain, for want of such a timely Discharge, and of such weak Liquids. I have seen the Brains of such Persons, upon Dissection, loaded with Blood; every Vessel, which could not be seen at another Time, has now appear'd stretch'd, tho' extravas'd Blood had been spilt out at every Extremity of them. The same have we seen in the Lungs, Liver, Stomach, and else-

elsewhere. according to the Part that was attack'd. I would not however be understood to speak indiscriminately ; for some, if not most, of our Fevers do commonly not admit of above twenty four Ounces in all, altho' they be of the sanguineous and ardent Kind ; this Quantity most usually abates any inflammatory Symptom ; I say abates, for it is not advisable to take off Blood, till the whole Symptom disappears, it is for the most Part sufficient to alleviate the Complaint, till they are much better, for a small Remainder may be attack'd with Alteratives ; and if we discharge, till we endanger a *Crisis*, this is a Fault not readily amended : And moreover, as 'tis easier to take off, than to supply Spirits, we may, if requir'd, sooner draw off more, than amend that Error. There is a determinate Degree of Motion demanded for a *Crisis* ; if the Blood moves a little faster than it should, it is always in our Power to abate that Velocity, but it is not always in our Power to hasten it to such a Degree as we wou'd. At the Time of a *Crisis*, we are oblig'd to be cautious in Bleeding, lest we interrupt Nature's Work ; however, even at that Juncture, and more especially in such
eruptive

eruptive Fevers, as have their Crisis pretty early; for Example, in the Small-Pox, whose Crisis is, or ought to be, on the fourth Day, we may with Advantage draw off Blood, where the Fever is very high, and a great Inflammation attends; for what forbids us in a phrenetick Delirium, with a high Fever, and a high and large Pulse, to draw off a sufficient Quantity of Blood, altho' the Pustules are already breaking forth, whatever the Ignorant say to the contrary? Is not this Practice allow'd of Abroad? Is it not encourag'd at Home? Is it not done with Advantage to the Patients? And does not Reason favour the Practice? For my own Part, I have been amaz'd to see this vulgar Error so much favour'd by Persons otherwise eminent enough! I take it, that a Physician, who wants Courage to put Experience and Reason into Practice, deserves Reproach; his Advice ought no sooner to be ask'd, than to be put into Practice; he has a fair Plea against the Recusants, and may justly attribute every Failure to their Obstinacy.

As to the most proper Time of Bleeding, I have the following Reasons to confirm me, that the Fit is the most convenient Season; namely,

namely, because tho' out of the Fit we can readily know all that relates to the Quantity of Blood circulating in the Vessels, yet it is not possible to know the Velocity of its Motion in the Fit, till we actually see them under one; and this seems with good Grounds to be the settled Opinion of the Vulgar, which has been handed down to them from our Ancestry of Physick, when they seem willing you should not bleed them, till you have seen them at the worst: We have several Indications to pursue, of which this is one of the chief: The Velocity produces the various Modes of Pulsations, and it originally springs from the Qualities in the Blood; for as the Blood is stock'd with Salts in a more or less eminent Degree, it more or less irritates the Heart to *Systole's*, and occasions the greater or less Frequency, the greater or less Stroke, the Hardness or Softness, and other Modes of the Pulse. The Heat also is a Consequence of this Velocity: Now as the Quantity and Velocity are better abated by Bleeding, altho' by different Means, yet it may justly be affirm'd, that a Physician must be more fully determin'd in his Judgment, when both are in View at once; and when we are render'd capable of know-

knowing how great a *Nisus* the Particles have to each other, or how near they are posited to each other; as whether they are not placed so nearly to each other, as to be compress'd and made to crowd one another, and render'd thereby too cohesive; or whether they are not so dissolv'd, as to endanger a Rupture of the Vessels: Our Care must be so to proportion this Discharge, that the contractile Force of the Heart may be somewhat lessen'd; that is, such a Quantity must be taken off, as the Heart may not fill so soon as before; for as there is a Restituent or Elastick Force in our Fibres, especially in the Heart, Lungs and Arteries, it must follow that the less is the Quantity and Velocity of the circulating Mass, the later will the Heart be before it is full, and the later then will it recoil or contract, and the slower will it move. The Reader may readily see, that I suppose the Heart to contract itself only, when it is full to such a Degree, or when it has very irritating Particles in it, which produce an equivalent Effect with that Quantity. The first Case is discoverable by the Fulness and Hardness of the Artery, when it is felt; and the latter by the Jerk or Quickness of the Pulse; and both

both are known by a full and quick Pulse : The Quantity then to be taken off by the Lancet must be greater, as one or more Causes do indicate.

THIS present Season has afforded many Examples of stubborn Eruptions ; for which Catharticks of the common Kind have little avail'd ; they are rather of the dry Kind : For, continuing the same Supposition, which I have all along held, the Blood is not ferrous, it is rather void of Water, it has been thickned by the Heat of the Weather, and the whole Aggregate is saline and viscous ; it is apt therefore to stick in any capillary Vessel, and to erode, or however, to occasion an Itching, and as the Blood is equally corrupted, this becomes universal ; and it is diversify'd according to the Nature of each Person's Constitution, no one having the like Number of Particles corrupted, or no one having the exact Degree of Corruption of another : Wherefore Catharticks ought not to precede or lead the Van in Remedies, the Blood must first be well diluted and prepar'd, to enter into the minutest Channels, before we attempt to carry it off. In an Affair of greater Consequence ; for Example, in hysterick and hypochondriack Cases,

Cases, we are always admonish'd, and 'tis agreeable to Experience, to avoid giving Catharticks, till other Remedies have been made Use of, because we find that *they* give Colicks, and raise Inflammations of the Bowels, because the Juices being too gross to enter into the Glands, or however to pass them, they inflame without Discharges; and as in that Case the Blood is too adust, so is it here; what therefore does not agree in that Case, cannot but disagree in this; such a State of Blood is fit to give Birth to all scorbutick and stubborn Emissions; heating Remedies are very improper, they contribute to drain the Vessels of their due Quantity of Water, they irritate and stimulate all the secretory Ducts into too frequent Oscillations, and invite them, nay provoke them, to part with what is most fluid and thin, and leave these fierce Salts behind; these Salts impacted almost irrevocably into the smaller Orifices, don't cease to ravage the Parts, either by contracting them unseasonably and constantly, or by eroding them; if many of them fix upon any one Part, then an Inflammation and an Abscess ensue; but if they are dispers'd all over the Body, then we find nu-

D

merous

merous little Inflammations and Abscesses : The difference is plac'd in the Distribution of these morbid Particles ; for where the morbid Juices are *juxta-positæ*, they produce but one large Inflammation ; and if on the contrary they are equally divided among the Vessels, then these Inflammations are rais'd all over the Body. If in the present State the Blood over stock'd with Salines should rarefy the Blood too much, as may be the Case of great Numbers, which is easily known by the febrile Pulse and Heat as well as Thirst, yet at last the Blood will be brought to be too gross from the Evaporation of the serous Parts ; so that in either Case we are to have Recourse to Diluters, and gently attenuating Remedies, whether in Fevers or out of them ; all watry Liquors dilute and melt the Salts that hold the gross Particles together, whereby the Coagulum is softned and fitted to pass thro' the smallest Tubes without cohering, they carry off what they melt down ; and by Salts more agreeable to our Nature, the Blood is supply'd with such Remedies as gently irritate the Parts, for some Stimulation is always requir'd ; the Blood will thus be reduc'd to its natural Consistence, the
secreto-

secretory Ducts will be no further stimulated, than is requisite, the Secretions will be natural in their Quality and Quantity, all the miliary Glands will be scour'd of their exotick Salts, and be supply'd with fresh of a natural Temperament, the Obstructions and all their Consequences will be open'd and prevented, the preternatural Commotions and Struggles will be allay'd, and Health will be restor'd. The nitrous and vitrioline Salts bid the fairest for these Effects; for they by Experience are found, when justly diluted, to cure Eruptions; thus we find *Lambeth-Waters*, for Example, and *gently chalybeated Waters* to be excellent in their Kind in these Eruptions, and more particularly the former: And whereas these Eruptions do mostly succeed Fevers, such Remedies are then very proper; because, as the Fever has render'd the Blood thick and viscid, by the Sweats and large Discharges of Urine; they dilute it, and render it fit to pass all the Emunctories, and correct those picquant Salts, envelop'd in the Viscid, and hinder them from producing their Effects, or correct them when they have caus'd their Eruptions.

As to eruptive Fevers, we find their Symptoms differ according to the Times of their Eruption ; but all of them bring on Oppressions of the Breast a little before they break forth, which are reliev'd by a full Eruption of the Spots or Pustules. There is a certain Specification of their Matter, producing Symptoms regularly and nearly alike, and making them to appear at a certain Period of Time : These almost inexplicable *Phænomena* do oblige me to descend to some Particulars, which will elucidate the Affair. There is no doubt, but Diseases are fram'd of Matter as essentially different, as are the Particles of Plants, which cause different Odours and Tastes ; and as the same individual Principles in these, variously modified, do give a different Odour in two Plants, so does the same Blood afford Degrees of Cohesions or Solutions ; and as the same Particles, variously order'd, give a different Smell to Rosemary and Thyme, so the same Matter, differently modell'd, produces the Small-Pox and Measles. The etherial Oil, blended in a peculiar Quantity with the essential Acid and Water, as *Lemery* observes, give the Taste peculiar to Turpentine ; this is by some call'd the *Spiritus Rector* ; and

in like manner the various Sorts of Eruptions in Fevers are speciflicated by a Digestion in a Degree to us unknown, that is, the Quantity and Degree of Digestion is to us unknown. Odours and Tastes may be lost or changed by bare Infusion, as Experience informs us ; for Mustard-Seed, mix'd with Cyder, and fermented, gives to it the Taste of Garlick ; Hind's Tongue, infus'd in Liquor, gives to it the Taste of Florentine Orris ; Asarabacca Root, pulveris'd and mix'd with the Phlegm of Vitriol, will smell like Spikenard ; and we observe in making the Salt of Steel, that as soon as the Water is pour'd on to the Oil of Vitriol and Steel, a Smell like that of Garlick taints the Room : And as the same Bodies, variously digested, or concenter'd and blended, give Concretions of differing Degrees, more or less hard, and more or less corrosive ; so fares it with the Mass of Blood, which has one Sort of Cohesion in the Measles and Scarlet-Fever, another in the Rash, another in the Small-Pox and Buboës, and another of a different Degree and Nature in Carbuncles : In the first, it rises no higher than the Cuticle, and fades away in little Scurf ; in the second, it appears above the Surface of the Cuticle, and grows red,

and then scurfs off; in the third, it appears above the Cuticle, inflames, suppurates, and scabs off; in the last, it swells not much, but soon proves Caustick, and corrodes the Skin, and mortifies it: But all these are Obstructions in the Lymphatick or Evanescent Arteries, produced from the Oils and Acrimories of the Blood, which, by various Occurrences and Commixtions, are made to cohere in innumerable Degrees. It is hardly possible so gross Blood, as this Mixture makes, should be carried thro' the Lungs without sticking to and loading them, which therefore makes them stark, and unfit for Inspiration; but they only are not loaden, for all the inspiratory Muscles also partake of this concreted Matter, and it nearly stagnates hereabouts: All the volatile Remedies, all the Stimulants, and all the warm Diluters, are of Use in these Cases. Hence is it, that in such Oppressions the common Methods are these, *viz.* we use Spirits of Hartshorn, Spirit of Lavender, *Pulv. ad Guttet. e Chel. C. C. Sal. Vol. Cornu Cervi, Sal. volatile Oleosum*: We apply Blisters to different Parts, and we cause them to dilute with thin Broths; because the Volatiles act upon the Fluids by attenuating, and on the Solids by stimu-

stimulating them to more frequent Contractions ; because the Diluters get in between the Interstices of the concreted Matter, and hinder as well as dissolve their Cohesions ; and because they dissolve the Salts, which are the Bond of Union ; and lastly, because the Blisters do strongly stimulate and contract all our Fibres, and do thereby push the Juices forwards, and hinder their standing still, which is always the last Scene in these Obstructions, when they are numerous and painful, or where their corrosive Faculty destroys the Circulation, or endangers its Course.

I can't conceive how some, otherwise learn'd Physicians should deny critical Days, since we daily find Fevers to terminate by them ; and indeed, whoever pretends to carry Fevers off without waiting for some Degree of Concoction, makes an irregular Harvest, and mows down nearly all he pretends to Cure : Whoever escapes under such a Practice is of a happy Constitution, and wou'd have had a much fairer Chance, if he had fee'd his Physician for standing still ; because such a Method is inflicting a Symptom at Pleasure, and he meets with Rubs, which are only Creatures of his own making.

The whole Body of Physicians, that have sound Judgment, allow of critical Days; and Practice shews there are such; but in our Climate there is no Certainty of the Time; for Fevers vary in every Individual, according to the Constitution; the same Season, the same Sort of Fever, and the same Symptoms don't determine the Time of the *Crisis*; for in some we shall find the Fever will tend to Maturation in seven Days, in others in fourteen; and in others again in thirty: So that altho' every Fever is ended critically, yet not in the same Time: The Time is chang'd in a rational Way of Proceeding, by the Methods, or the Symptoms that invade them; if no Symptom afflicts the Patients, the Time is foreseen by the Degree of Motion in the Juices, for a high Fever soon terminates in Death or Health, whereas a slow one takes up a longer Time: A high Fever, which hurries on Inflammations, requires a long Time to allay the Symptom, after which we fall to prepare the Blood for a critical Separation; great Discharges by weakening the Patient, retard a critical Effort; for after they are remedied, and no one can conjecture how long a Time will pass over, ere this can be effected,

effected, we must rear their Spirits, and bring the Juices to a determinate Degree of Consistence, before the Crisis will be attempted : It is however certain, that whatever Discharges (whether attempted by Nature or Art) have been made, the Quantity left behind is easier therefore brought to Maturation, if it can at all be done ; and such Persons undergo less Fatigue with Medicines. There is in Fevers, in the beginning, too strict an Union of the Particles, which must be dissolv'd ere a good Crisis can happen ; however, I can't be so superstitious as to suppose that Fevers are concocted only in uneven Days ; that is, I see no Reason, why a sixth, an eighth, a tenth, a twelfth, or a sixteenth Day may not be trusted to for a Crisis, as well as a seventh, an eleventh, or a thirteenth ; this is as if Nature, like the Gods, were pleas'd with odd Numbers ; so much is certainly ridiculous, and does not quadrate with Experience in our Island : The Promotion of a Crisis is favour'd by the Remedies proper for each Species of Fevers, for you are to incrassate a State of Blood too much dissolv'd, and you are to attenuate too gross a Blood ; a Rheumatick State is to be dissolv'd
in

42 *Practical Observations on the*

in a different manner to what a phlegmatick one is: In it thin Liquors, gentle warmth, and nitrous Medicines, are requisite; it bears no Remedies very volatile and moving, which seldom fail of making them delirious, thirsty, and of hurrying on Convulsions: We are obliged to make slow Haste in this Fever; the cooler Remedies hinder Concoction, and we lose the proper Opportunity of Putrefaction, or Separation: We must therefore move in a middle Way. In a very putrid and malignant, or pestilential State, we must be cautious of waiting for, or expecting any Concoction at all; for, *Quod putridum tolli, non alterari, postulat*; generally speaking, we are oblig'd to endeavour at Expulsion: We ought carefully to observe two Things, whether, to wit, any Separation was made in the Urine, before we were call'd, or whether we are to expect none; if the former be the Case, Expulsion is absolutely necessary, suited to the Nature of the Fever; and if the Juices be so cohesive as to attempt no Separation at all, as the Pulse, Heat and Urine will inform you, then are we to trust to nothing but effectual Cordials and Stimulants.

THE

THE exact Returns of the Fits at stated Hours have puzzled all Ages to account for them ; which however may be solv'd by an easy Supposition ; for if we suppose the Blood to be of an unequal Texture, that is, unequally concocted, then it follows, that the whole Mass is variously circumstanced, or in other Words, variously corrupted ; so that there are contain'd in it, if the Fever should continually observe its original Type, an infinite Number of Corruptions of different Degrees, which become of Age, as we may say, or are hatch'd at certain Terms, and act their dismal Scenes : If we consider the Symptoms and the Time, we shall more readily conceive the Reason of what happens. The Patients on a sudden grow chilly and cold, they shiver and tremble all over them, they grow pale, their Nails turn blue, they are dull and sick, their Pulse is obscure and small, but quick ; and thus they continue for a shorter or longer Space of Time, as the Nature of the Cause is more or less prevalent : When this Scene is over, they begin gradually to grow warm, till they burn with Heat ; their Pulse from weak grows strong and large, they are thirsty, their Urine from pale turns deeply red, their
Heads

44 *Practical Observations on the*

Heads ake, and each Symptom, the State and Condition of the deprav'd Humours can produce, commences and affects the Sick with Fierceness; but when Sweats break forth, and the Urine settles, all the Symptoms gradually lessen, and at last either a perfect Calm ensues, or a Truce is obtain'd, till a fresh Attack, after one, two or three Days Distance is made, and the same Round is taken again; the Shiverings, namely, the Heat, the Sweats, and the Declension of the Fever begin, and regularly succeed each other; and this Train is kept on, till the whole corrupted Matter of the Blood is exhausted; and if the whole Mass be thus circumstanced, nothing can happen but Death, unless Assistance be properly apply'd. The Hopes or Expectation of a Corruption of a small Part of the Mass, has made too many suffer to wait any longer; for even what Physician can foretell how many Fits his Patient shall have? How much less can Patients or their Friends pretend to this Secret? Let them not therefore vainly wait for the bettering of their Affairs, but apply to proper Persons in due Season. I shall endeavour to account for these Returns in the following easy manner: There appear then

to

to be various Parcels of Matter in our Blood, of different Degrees of Concoction; and supposing the Fibres, by their compressive Force, to comminute the Viſuals into Chyle and Blood equally in equal Times, the Juices will be, in equal Spaces of Time, of an equal Degree of Cohesion or Tenuity: If then the Maſs of Blood, or ſome Part of it, be cohesive in ſuch a Degree, as to irritate the Nerves into Convulſions and Shiverings this Day at Twelve a-Clock, and if the ſame Scene begin thirty Hours after, it ſhews that the firſt corrupted Parcel was riper than the latter, by one, and one Quarter of Time; and that the latter will only be in that Condition thirty Hours after; as the third Parcel will be in ſixty Hours after the firſt; and the fourth in ninety Hours; and ſo on for each Fit that can be produced in any assignable Tract of Time: Theſe nice Degrees of Cohesion however are by no means viſible or perceptible by any Trials to us: But Cohesion alone is not the Cauſe of all theſe Effects; there is another Quality which cauſes this Cohesion itſelf, and that alſo irritates the Nerves; namely, the *Salts* of the cohering Matter prick the Nerves, and cauſe all thoſe Tremblings of the Muſcles,

cles, which by this Agitation hurry forwards the whole Mass, that without them would stand still, as it very often happens, in a very cohering Blood, notwithstanding this useful Struggle: The stagnating Juices are made to meet each other by this compressive Force of the Fibres, which the Irritation occasions; and by this frequent Occursion, they are jostled against each other in such manner, as to make them exert their Elasticity; they grow less cohering thereby, till they become thin, and fit to pass the smaller and capillary Vessels and Glands, and then a Calm ensues. All this Account being easy and natural, we are to consider why the Remedies given to prevent these Returns, are beneficial; and as the most eminent of these is the *peruvian Bark*, when it is fresh and well-condition'd; we shall see why it operates hereafter, namely, by its bitter and earthy Parts, which attenuate the Fluids, and contract the Fibres, and so prevent all Cohesions for the future; and by a Continuance of it, each Parcel of Blood is brought up to a convenient Degree of Digestion, or to such a Pitch of Fluidity, as is convenient and suitable for that Individual.

WHERE

WHERE Relapses in Quartans are so frequent, it will follow, that the Blood will at last be very much deprav'd; it will either be too gross, too watry, or too saline, and Diseases will follow of various Natures, according to the Humour reigning: So that Cachexies, Dropsies, Jaundices, Hecticks, Convulsions, and such Diseases, will ensue. Some of which to relieve, I shall hereafter observe. I cannot but think these Relapses might be prevented with powerful Attenuants; nor do I quarrel with those who would attempt a gentle Salivation in such a State of Blood. *Ettmuller* is not the only Author that encourages this Discharge in Quartans: I have known it of use in the very Case; for having mixt *Mercurius Dulcis* with the Bark, in a small Quantity, and having apply'd a Plaister, made up with *Cinnabar*, to the Stomach and Wrists, without any other Design than to attenuate; the Patient's Constitution being very easy to yield, the Mercury, tho' only to 12 Grains in all, and given at a Grain a Time, and perhaps the Plaister also, salivated, wrought upwards and downwards, and carried off the Ague-Fits; nor have they hitherto return'd. It is almost necessary to derange the Situation of the Par-

ticles of the Blood, where Patients are continually relapsing : Nothing acts more powerfully than Mercury does in this Case, for the whole *Serum* is changed for new, and the Salts, which are the Bond of this preternatural Cohesion, are carry'd out of the Mass, and fresh are supply'd by proper Attenuants ; so that the Patients are renew'd, and put out of Danger of falling into the like State, at least till they again deprave their Blood with the six Non-Naturals. However, Prevention being great Part of a Physician's Care, he must point out to them how to manage themselves for the Time to come : They ought to avoid all Pickles, all Saline Diet, Milk Meats, the Sea Air, an unactive Life ; and in short, every thing that will render the Blood cohesive and irritating ; and in their Stead he must order them to use attenuating Roots and Herbs in their Diet ; namely, Horse-Rhadish, Mint, Cresses, Mustard, Peppers, old Cheese, and such like ; because these prevent Coagulations, and do keep the Blood dissolv'd. However this Method is not rashly to be advis'd to all, because if the *Viscera* be under such Disorders as will not bear its Administration, it must be forborn ; for Example, if the Patient

tien
or
may
an
obf
tion
wo
it
wit
but
of
Sali
thes
Scir
at al
thin
the
Visc
the
ticles
nate
it is
on D
are
Reas
Vesse
be as
of u

tient should be subject to a Consumption, or some other such forbidding Disease, we may bring a Disgrace upon our Art by such an Attempt; or if there should be any obstinate Obstruction which the Commotion rais'd should prejudice more, than it would profit by the aperient Quality; for it seldōm happens that Persons are seiz'd with long or frequently relapsing Quartans, but the last Effects of them are Obstructions of the Liver, Spleen, or Mesentery; and Salivations are not a proper Method to take these off, because the Method of curing Scirrhus's for Example, if they can be cur'd at all, is not to discharge and drain off the thinner Parts of the Blood, but to dissolve the Coagulums or Offa's deposited on these *Viscera*. The too strong Efforts made by the Blood, impregnated with Mercurial Particles, will open or break; and as in obstinate Obstructions, the latter is to be fear'd, it is more advisable to forbear, than to bring on Discredit: And moreover, as Mercurials are easily converted into Vitriols, we have Reason to fear this should happen in our Vessels, and then the Styptick Quality would be as prejudicial, as the Aperient would be of use. These hard Swellings are best dug

E

down

down by mild and gentler Aperients, for fear of raising Inflammations, or of converting them into Cancers; nor is it advisable, where Weakness affects the Patients, till we have first recruited them with restoring Diet: One thing is very observable in all Fevers whatever, namely, that a Salivation is always critical, without waiting for a Concoction in the Urine; and if we manage rightly, we never find Persons labouring under a Fever to die, if they salivate plentifully: This is too common an Observation in the Small-Pox to be doubted of, much less to be denied; wherefore, as the Salivary Glands are a sure Receptacle for the morbid Particles to pass off by with Safety, a Salivation is but aping Nature in the Discharge of the Disease: We need not wait for * Concoction, but may attempt an Evacuation; which, if gently carried on, attenuates, dissolves, carries off, and gives Room to supply Spirits, and Serum of a laudable State. So much Good does a natural Salivation do, that I am surpriz'd we don't extend its Use farther in other Fevers; and I am very well as-

* Hippocrat. Τα πύπωνα φαρμακείων.

fured, that since my advising an Attempt of this Kind * in the Small-Pox, when the Salivation was in Danger of being suppress'd, that it has been attempted with Success by such as the Manner was communicated to, nor can I see what should hinder it; for my own Part, I shall still be cautious how I say too much, till so many Experiments have been afforded me, as to be ascertain'd in every Particular, and then the Publick shall not fail to have a further Detail of the Matter.

SOME have lost all the Elasticity of their Fibres, so that whether Volatiles be administered, or Blisters be apply'd, 'tis the same as if they were given or apply'd to a Carcass; it is true the Blisters do rise, as they wou'd do if we fomented a Carcass, and kept it warm; but still they lose all their natural Effects, namely, they give no Strangury, they raise no Heat, they neither quicken nor strengthen the Pulse, nor encrease the Quantity of their Water, and to be brief, the Patients are even insensible of the Pain: This is a Case we sometimes meet withal, not in the advanc'd only, but even in young Persons,

* Euod. p. 197, 198. Second Edition.

where we might expect a Spring in the Fibres. It is easy to judge of this Constitution after the Application of a few Blisters, and generally speaking, this is the Case in petechial Fevers, where the Blood is greatly deprav'd; in them the unequal Texture is universal, and the Blood is every where alike concreted, no Remedy is strong or quick enough to dissolve the Grumes, for the Blood stands still almost every where; nothing effects this more suddenly than putrid Steams, Examples of which we frequently see in the Small-Pox, where, upon their retreating, the Blood stands still at once, altho' a few Moments before the Pulse promis'd no sudden Mischief, and the Physician believ'd the Patient in no great Hazard. I have sometimes indeed thought in the Case before us, that these Steams mov'd the Blood too much, so that the Fibres cou'd not circulate it so fast, and therefore it stood still; and doubtless this is also sometimes the Case in the Small-Pox with a strong Fever, and Bleeding in this Case is a Remedy; but I speak where this Distemper is accompanied with a small Pulse and feeble Spirits, and where by some small Mistake of the Patient or Attendants, the Pustules
have

have retreated a little ; Fibres can't remain elastick without a Flexility, and where the Blood is stuffed with too many rigid Salts, in Proportion to its flexile Parts, the Fibres will partake of the Nature of the Blood, for they are nourish'd by it, and are more or less flexile or rigid ; as the Blood that passes through them so frequently, is circumstanc'd. In the Case before us, the oily or flexile Parts are turn'd into Grumes, by some odd and preternatural Mixture, the Fibres are render'd rigid and incapable of Oscillations, the Blood therefore engag'd in them is not propell'd, nor can it ; for there is no Circulation without a Contraction and Dilatation of the Arteries, and they being every where rigid, they are always in a State of Contraction, and therefore the Blood stagnates ; there is no Room to expect Life in this State or Condition ; for Life depends on the Circulation, as a necessary Condition, and when that is at an End, we must cease to live : However, as we know not certainly, but Numbers of Blisters, and large Quantities of volatile Remedies may do good, we are oblig'd to persist in the Use of them, making a fatal Prognostick : For as the Resistences to Motion

are augmented by the Rigidity of the Vessels, and the Velocity is diminish'd by the Force of the Heart being lessen'd from the Want of Spirits, all we administer or apply must be irritating, cordial, and relaxing: The first two are indicated from the Defect of Spirits and Oscillation; and the latter is required to lessen the Rigidity, which are Contra-Indications; and therefore hard to be remedied, where the Indications are equally fix'd, and the Hazard is equal. If we don't relax, the Vessels may still remain too rigid; an Increase of the Moment of the Blood may break the Vessels ere it relax them; wherefore, as *Baglivi* has justly observ'd, that warm and relaxing Fomentations, apply'd to the Hypochondres, serve to divert Fluxions upon any Part, by lessening the Resistance at the Part fomented; so it can't be amiss to apply warm Applications to the Feet, where the Vessels are too rigid. These warm Applications are suitable to *Hippocrates's* * *Calidâ lavato*, or his fomenting with warm Water: They relax so far, as to restore the Elasticity of the Fibres, which, when done, the Stimulants and Alexi-

* Hippoc. de Morb. L. 2. Sect. 5.

pharmack Medicines will push the Blood forward with greater Ease into the Vessels, which are now put into a Condition to yield to its Influx : In this manner the Secretions are perform'd, the morbidick Particles are thrown off, the Blood is clear'd, and the Disease does gently disappear.

MALIGNITY is discover'd by various Signs; it is the Consequence of an unequal Texture in the Blood or Spirits : In the Vessels, we detect it by Eruptions ; and in the Nerves, by Convulsions and Deliriums, without any apparent Reason, as also by the Pulse turning suddenly weak : What is the numerical Cause of it, is not easy to determine ; but as the Blood and Spirits do both denote Irritation and Obstructions, we may lawfully pronounce it cohesive and saline ; all these Effects being deducible from these Causes, and the Remedies do also confirm us that our Conjectures are just.

HERE I think it necessary to dissuade young Practitioners from the Example of some, whom I have seen act contrary to all regular Practice, to the Light of Reason, to Conviction, and to common Sense ; my Readers must pardon so high a Charge, every Article of which is true. It was never

ver yet advanc'd, from the earliest Days of the Medical Art, down to this Century ; that Catharticks, as such, were to be given till Signs of Concoction appear'd ; it is true, we are glad of dark Signs rather than none, and willing to embrace them. It were contrary to the Light of Reason to pretend to make a Separation by Physick, where none had preceded, but more especially if the Body be of a plethorick Habit, if the Fever be in its Beginning, and be strong, the Pulse great and full, and great Head-aches be rais'd, because Physick here may probably add a Commotion to one already too much exalted ; in which Case emptying the Blood-Vessels, by taking away Blood, will surely answer the End adequately : If these Symptoms are truly represented, the Person who acts in a contrary Manner, must be *convinc'd* he acts contrary to the Rules of Art, and that insisting on a Discharge by Bleeding, cou'd not be call'd *Disputing*, but a tenacious Adherence to the good of the Patient, and hindring the Opponent from acting in Contradiction to common Sense. Such Patients may rather be said to have escap'd, if they recover, than to have been cur'd. And altho' such Physick, as

Authors call *Minorative* or *per Epicrasin*, may at all Seasons be allow'd of, as well as a gentle *Diarrhæa*; yet the Assistant, who has any Skill or Humanity, never cares to act busily; that is, without an Indication, and particularly will never thwart a true Indication; for this is leaving the known, the short, the clean and direct Road for another, which we are well inform'd is surrounded with Brambles and Quagmires. It is very certain, and I have frequently experienc'd it in this Fever, that assoon as the Urine subsided, where the Bark had been administred, a gentle Cathartick given in the Morning, and a paregorick Draught at Night, and this Method repeated for two or three times at convenient and proper Distances, the Patients seldom fail'd of recovering; or if the Fever did not intirely vanish, at least it was so diminish'd, that a common Regimen due for other Fevers, namely, an Abstinence from Flesh-Meat, Draughts of Sack-whey, keeping warm, and encouraging gentle Sweats with drinking Thea, effectually carried off the Remainder, and bitter Infusions along with *German Spaw-water*,

water, given in a Morning an Hour or two before Meals, restor'd their Appetites, strengthen'd their Stomachs, gave them Briskness and Life, and made their native Colour return, so that they were plac'd in a settled State of Health, they were invigorated in such a Manner, that they bore the Air without danger of Relapses, if the Patient were obedient to Directions; for it is not safe to expose themselves too soon, after a Fever, to the open Air; because the Juices being rarefied, and the Pores being dilated, by the warm Regimen made Use of in Fevers, the cool Air has a sensible Effect on the Fluids, by suddenly condensing them, and indeed congealing them; so that Rheumatisms are frequent Consequences of this ill Management, and also on the Solids, by contracting them suddenly; so that the Pores are shut up, and the usual Effluvia are retain'd, and a Shock is given to all the Fibres, and Shiverings and Fevers are renew'd too often.

MERCURIALS are safe and useful Purgatives in Fevers; they don't only carry off the morbid Particles by Stool, but being Vitriolick, they also præcipitate them thro' the Kid-

Kidneys, and are therefore doubly useful; The Humours, after such a Purgative, discreetly managed, don't assemble so readily again to raise Commotions; for besides the Quantity thrown quite out of the Blood, the Juices being impregnated with the Vitriol, are render'd heavier, and do begin to lose their attractive Force, and are apt to be carried off by Urine; and as saline Bodies are reputed the original Cause of Fevers, inasmuch as they do irritate the Heart to more frequent Contractions, and as they meet with some other Principles in the Vessels with which they raise Tumults, these Vitriols are Absorbents of these Salts, and they do therefore enervate them by joining in with them, and do at last throw them down; so that they act in a double Capacity, as Evacuants and as Alteratives: But Caution is necessary in the Use of them.

IF Catharticks cannot be administer'd, because the Strength of the Patient will not admit of them, there is yet a Method remaining, by which the Humors offending are thrown out of the Body almost in an insensible Manner; or however, so gradually, as
neither

neither to weaken them, or be perceptible to the By-standers : I mean, they may be *præcipitated* out of the Blood by known and experienc'd Methods, yet not much thought on by most of the Faculty : When I speak of *Præcipitation*, I mean no otherwise than Chymists do, when they throw down Contents of Liquors to the Bottom ; for Example, out of sublimate Water, a white Præcipitate is got by pouring any volatile Spirit into the Water ; the Reason of which is, that the Fluid containing the Sublimate is attenuated, because more attracted than the Sublimate, and the Sublimate which before was attracted, and therefore suspended, drops to the Bottom : In like Manner, Resin of Jalap is præcipitated out of Spirit of Wine by Water, or Earths are præcipitated from acid Spirits, by pouring on a great deal of Water ; or Gum Arabick is præcipitated out of Water by Spirit of Wine, because Water and Spirit of Wine in the first Case attract each other stronger, than the Resin and the Spirit ; and Water and Salts in the second attract each other stronger than the Salts and Earth ; and in the third, the Spirit of Wine attracts
the

the Water more strongly than the watry Gum ; and therefore, as the Suspension depended on Attraction, the Præcipation depends on a Repulsion. In our Juices, the individual Thing, and the Reasons hold true, whatever some unexperienç'd, but bold Asserters prate to the contrary : But as the Brevity I aim at, does not permit me to descend to many Particulars, I shall instance in a few, leaving the main of this Discourse to the *LECTURES* I have so often read to Pupils, and shall publish in as convenient a Time, and with what Expedition so great a Work allows. If the cold Air causes the Sulphurs in our Urine to cohere, we find that the Heat of the Fire dissipates 'em, and makes 'em swim imperceptibly in it : The Salts folded up in the Sulphurs in our Urine are præcipated by Galls in Powder, or indeed, by any styptick Drugs, or by any concentrated Acids in particular Constitutions: The *Serum* it self will grow muddy by these Experiments : It is known, that Earths or Earthy Bodies do præcipitate Sulphurs ; for Salt of Tin, or Crystals of Tin, will præcipitate Wine, when it is upon the Decay : And it further appears to have this

Effect

Effect on Decoctions, when Alum makes the Particles of the Plant to emerge, which is call'd a Præcipitation, or rather a Separation. The same follows in our Urine, from the Administration of Earths internally ; and I see no Reason, why the same Cause should not act, when the same Effect ensues. When we administer testaceous Powders in Fevers, we observe that a Subsidence in our Urine is the natural, usual and constant Effect, that follows their Use ; and it always has been advis'd by Practitioners of Note, to use Alum, Sugar of Lead, Conserve of Roses, Coral, Terra Sigillata, Spirit of Vitriol, Bole Armeniack, Bezoar, Hartshorn calcin'd, and the rest in Fevers. I need mention none beside *Riverius* and *Mayerne*, who have strenuously inculcated their Use in Practice : Were these to act no otherwise than by their Weight, and angular Figures, the Consequence would be an Attraction with the Sulphurs, an Encrease of their Weight, and a slower Circulation, and a Præcipitation of the morbid Contents, which gives a regular Indication of Purges after such an artificial Procuration of a Sediment : But it ought to be remark'd, that
such

such Remedies are only effectual in a too rapid Circulation, and then alcalious Earths are too ambiguously made use of, because they may attenuate as much as they præcipitate. What I would infer from this Advance, which as to its Reason is new, is, that Præcipation being an Extermination of some Particles, most or great Part of which are morbid, it may not improperly be call'd a Discharge of them, and is principally to be made use of, when Danger would ensue from any the least sensible Evacuation, as it frequently happens in dangerous Fevers. In the Case of the petechial Fever, to be observ'd below, the Urine did not subside till the Vitriolicks were blended with volatile Salts: The Reasons of which may better appear in a larger Discourse; namely, the *Lectures*. No one, I hope, will suppose I exclude the Fibres in this Work, which by their Concussions and Vibrations help forward the Remedies, and cause proper Occursions; without which nothing could be done in the Affair before us.

As the present Fever is mostly remitting, it admits of the Bark, which is the most known Specifick we have against all Shiftings

ings in the Blood: What these depend on has already been discuss'd; so that the Bark seems to be most adequately levell'd at Concoction of the Blood, which seems to be accounted for in the following Manner: The Bark is *bitter*, and has a good deal of *earthy* Parts in it; it yields a *volatile Spirit*, as well as an *Acid* one; it has a good deal of *fix'd Salt* in it, and it is moreover *gummoſe*. The Bitterness, the volatile Spirit, and the fix'd Salt, do all contribute towards the same Ends; namely, they are the Occasion of its penetrating into the Blood, they render the Blood more Elastick, they stimulate agreeably, they are as rigid as the Fibres require, they are minute; and hence is it, that the Bark drives the Blood equably forward; hence is it, that it acts by entering the minutest Passages and Pores; hence is it, that it acts in a smaller Quantity, as it contains more of these saline Parts; hence will it be deficient if these Salts have been by any Chance evaporated, or have chang'd their Figures by Length of Time; hence is it, that Cohesions will be destroy'd; hence is it, that whatever Composition there may be in our Juices, it will penetrate and mix with, and unite these

these heterogeneous Particles; hence will it be, that our Secretions will be regularly perform'd; and hence will it happen, that our Fibres, if relax'd, will be made more tense by an Absorption of whatever relaxes them; its *earthy Parts* help Præcipation of the Humours, absorb the watry Particles, and obtund Acrimonies, resist Putrefaction, close up Orifices, make the Fibres tenser, and hinder too great Expansions of Humors; the *acid Salts* in it resist Putrefaction and Motion, stimulate the Fibres, attract the volatile and fixt Salts, the Oils and Earth, and keep them all united to one another, so that in Substance it will act best; the *gummoſe Parts* sheathe and obtund all Acrimonies, and take off Pains and Stimulations: When therefore such a Compound, as the Bark certainly is, and will in proper Place be made to appear, is administred internally; the whole united stimulates without Pain, it constringes the Fibres, and præcipitates Humors; it attenuates the Fluids, and destroys their Cohesions; it obviates the Causes of shifting, and produces a regular Circulation, which is attended with a strong, calm, large Pulse; and with a due Separation of such Fluids

as the Blood is us'd to part with; it concocts Part of the morbid Mass, and assimilates it to the Blood, and silently throws down the Remainder into the Urine; it produces a determin'd Degree of Fluxility in the whole Mass, and by the Attrition made upon the Fluids, and the Compression made by the Fibres, there is a proper Comminution of the Mass, or a Concoction made; that is, the Blood and Juices are reduc'd into our natural Constitution, our natural Temperament returns, and Health is restor'd. These are the Reasons why the Bark and other analogous Remedies succeed in these Shiftings; and whenever the Bark is tardy in its Effects, or suffers the Blood to return to its ill State, it must be defective in some one or more of its essential Parts; that is, it must want either its Salts, its Earth, its Acids, or its oily Parts, or the Air must offend in somewhat: Now there never was a Season, in which the Bark has fail'd so much, as it has this Year; for it is too well known, that the Fever has been cur'd, and Patients have soon, after they have ventur'd into the Air, relaps'd, and have again run the same Circle of ill Symptoms, if not worse, than before. It

is therefore incumbent on me to examine into the Reason of this *new Phenomenon*; I call it *new*, because the Bark has hitherto been found to be quick in its Operation, and has kept Patients steadily in Health, so that they might venture Abroad upon their usual Occasions, as soon as they had recover'd their Strength; the contrary of which we experience daily.

To determine upon this Affair, I must make mention of a Circumstance, which very few are appriz'd of: Several Years ago, I had some Occasions which obliged me to be near the Warehouses, and observing some Casks intitled, *Cascarella*, I was curious to know what Sort of Merchandize that was; which, however, the Person was unwilling to resolve me in, till upon my Assurance I should make no ill use of it, I was inform'd it was the Peruvian Bark, hid under that Name, lest the Glut of it should lower the Price, and the Importers should be prejudiccd thereby: Now all the World knows, there has been no great Demand for this Drug for many Years, till of late; so that the great Quantity then imported, added to what has been since brought over, could not have been con-

sum'd till this Epidemical Fever happen'd ; and it must now be brought into Use blended, and mix'd with more fresh, which has since that Time come to Market. The Inferences I would draw from this Discovery, are of very great Consequence, and may in part be guess'd at, without proceeding farther ; but I will endeavour to illustrate the Matter in as clear and short a Manner as I can. They who are vers'd in Chymical Operations, know very well, that fix'd Salts themselves, in Process of Time, will fly off into the Air, as certainly as the volatile ones do : As to the Volatiles flying off, I need attempt no Proofs to confirm it ; therefore it only remains to prove that fix'd Salts, which will endure the most violent Fire, without any sensible Diminution of their Weight, will yet fly away into Atoms in the Air : This is far from being a chymical Assertion ; for Wormwood, when fresh, will afford four Times more fix'd Salt by Incineration, than if it be kept for a considerable Time ; and the Wood of Oak, kept till it grows rotten, will give out no fix'd Salt at all ; whereas, if it be fresh, and burnt in the Fire, it yields a great deal. I chuse to give known

Instances, that there may remain no Doubt of the Truth of what I advance: These being certain and known Experiments, it must follow, that these Materials will fail of having the same Effects, when old and stale, to what they will have when fresh; not that they will have Effects of a different *Species*, for the old Saying is true, that *Majus & minus non mutant Species*; but their Effects will be less in the same Line: Since therefore we have good Reason to fear, that the Bark, by being long kept, has lost a good many of its fix'd Salts, and all its volatile ones, we have a plain and demonstrative Reason given, why it has fail'd so much of late, as every Physician that has any Practice must have observ'd: And as this Incident gave me early Suspensions why it fail'd of its usual Effects, I began to consider with myself, what Methods were to be taken to render its Use more effectual: It readily occur'd to me, that the Salts were in great measure exhal'd, and thrown off; and that a Supply of them, united to some ponderous Drug, would exalt the Virtue of the *Effete* Bark; and I did accordingly order an Electuary, made up of Cinnabar Native or of Antimony, Vo-

latile Salt of Hartshorn, and Conserve of Rosemary Flowers, and some Syrup; after which the Patient was to drink six Spoonfuls of Pearl Cordial: This I order'd to be given Morning and Evening, to a Quantity proper for the Age of the Patient; and every four Hours to take a Dose of the Bark, in Powder, Decoction, or Infusion, in the Remissions. I was not at all deceived in my Conjectures; for where the Bark given to large Quantities, and with a Continuance fail'd, and these Remedies were prescrib'd, I can produce several Instances, properly attested, that I succeeded, nay even beyond my own Expectations. Thus I reinstated the little Daughter of an eminent Painter, who had taken more Bark than would have cured two Adults, without any Success: Thus I cured the Maid-Servant of a Lady of Distinction, who had taken above nine Ounces of Bark in Substance without the least Effect, till she took this Electuary, which render'd the Bark, she took along with it, steadily effectual: Thus, in short, I have fail'd but in one who follow'd this Method, and I hope I shall receive Thanks for the Mention of so casual, but effectual a Method, as I have dis-

discover'd : But altho' this Method has so seldom fail'd me, yet I cannot deny, I have been so cautious as not often to administer more Bark after a great deal had been given ineffectually, unless the Patient's Weakness deterr'd me from pursuing other Methods ; because I judg'd it improper to give a great deal of a decay'd Commodity, which in Proportion to its active Parts, contain'd too many earthy and obstructive Principles ; and which might therefore lay a Foundation for Jaundices, Suppressions of the *Menses*, Dropsies, Inflammations, and a fatal Train of Diseases depending on Obstructions, and which a Physician, who regards his Character, would prescribe against after the Patient's Recovery ; but would probably be look'd upon as too officious for his Care ; and thus the Patients would neglect themselves, and the Physician would bear the Calumny. I say, I have rather taken another eradivative Road, if I saw any Signs that would encourage me in it ; namely, if I perceived that the Urine subsided, and that the Fever was moderate, I have, by giving mild Catharticks, and repeating them at proper Distances, quite extinguish'd and carry'd off the Fever, which by this

Method was not apt to relapse, as it was when cured by the Bark. There is, however, another Cause which might impede the Bark's Effect, and which is worthy our Mention, to wit, the Heats of last Summer were so extreme, if we consider our Climate, and so continued, that the Blood exhal'd more than it had done for many Years before, and the Blood of most People became Rheumatick; and thus, what with the Stiffness of the Size, and what with the Decay of the Bark, its Effects were neither quick nor steady; it would not penetrate into the Size, to remove the envelop'd Salts; and the Size was of such a Degree as to admit of no Drug to penetrate it, but what was ponderous, or at least very active, or both Qualities were to contribute to this End: And as the Bark had lost its active Particles, a Supply of both became necessary, and prov'd useful.

If the Bark should necessarily be given, by reason of the Danger the Fits bring the Patients into, we are not obliged to either Hours or Quantity; for if a Physician expects a Fit in six Hours Time, which he fears will endanger the Patient's Life, if their Stomachs will bear it, they ought every Quarter, Half Hour, or Hour, to
take

take so much, as Experience teaches us will prevent it. Thus have we known a Dram, given hourly to a Child of eight Years of Age, in order to prevent the succeeding Fit, which would most probably have bereft the Child of Life, and it answer'd the wish'd-for End: As for such who consult their Palates, and are regardless of Life, I have nothing to advise them to.

I have also in these Fevers chose to delay the Administration of the Bark, till proper Discharges had been made, or till I perceived the Fever had spent itself in good measure, by spontaneous and moderate Sweats, or Diarrhœa's; and particularly, I forbore its Use, if I saw any Obstruction had prevail'd, till it was thoroughly remov'd; for as it plainly appear'd, that the Blood was very viscid, it would have been raising Commotions, and producing dangerous Symptoms, to have given the Bark too early; because, if we give moving Remedies in a caco-chymical, and particularly a rheumatick Plenitude, that is, in a Blood that abounds in the Vessels, and is at the same time corrupted or tainted with a large Quantity of Viscids: These Medicines will rarefy the Mass, will make it possess a much larger Space in the Vessels, will endanger
their

their Rupture, or the corrupted Mass will be driven irremediably into them, and produce Inflammations, and other dangerous Obstructions; whereas giving it late, where the Fever still persisted in its Course, without hearkning to proper Methods, when the Size begins to melt down, it suffers the Bark, and other Remedies to enter into it, without raising new Struggles; these Remedies produce a farther gentle Attenuation and melting of the Size; they occasion a calm and equable Circulation; the Pores are open'd, the Glands renew their Functions, the Humours are secreted thro' all the proper Emunctories, and the Fever ceases. We see then how necessary is the Knowledge of the Qualities of the Blood, how impossible it is for those, unskilful in them, to have any the least Notion how to act as a Physician, and how little we are Masters of the Animal OEconomy, if we do not consider the Nature of *Concoction*; that Cohesion is to be destroy'd in a determin'd and stated Manner, that experienc'd Measures must only be trusted to in this Affair, and that these Degrees are only known by stated Signs, and attack'd in such particular Manners: And pray what is this but

but the Knowledge of the Qualities, and Motions of our Fluids ? The Secret of Cure relies on these Bases ; and they who are ignorant of them exactly, make unsuccessful Practitioners.

I know many, who are not scrupulous about the Taste of what they take, to prevent an Ague, do drink a Glass of White Wine in a Morning for three Days together, in which Garlick has been infus'd, with Success. This shews the Nature and Cause of these Fevers to depend on a Viscidity of our Juices ; for the Juice of Garlick is very foetid and acrimonious, and consists of strong and volatile Parts, which suffer not our Blood to run into Cohesions ; and the Epicarpia, we use of *Hellebor*, and such like, contributing also by their volatile or ponderous Parts to attenuate, do further evince, that Cohesions, are the original Cause of Fever-Fits, by preventing of which, we either prevent or cure the Fits : Some for these Ends have given, as a *Succedaneum* for the Bark, the Roots of Pentaphyllon, and of Snake-weed, to cure Agues, the former are astringent, and the latter is very volatile, so that as the Fibres are strengthen'd, and the
Juices

Juices attenuated, the Blood is put into such a stated Degree of Consistence, as that it will not run into Offa's or Cohesions, and will therefore circulate regularly forwards ; that is, it will not shift from Shiverings into Heats, nor from Heats into Sweats, nor have Fits ; but the Chyle will be converted into Blood, Lympha, Bile, and Spirits, proper for the animal Oeconomy, and convenient for producing all the Functions Nature requires. To be brief, all the Remedies of Agues handed down to us hitherto, are either of the volatile or fixt Kind, or of a volatile and astringent Nature, or they are ponderous ; hence Camphire, Cinnabar, Antimonials, Savin, Guaiacum, Nutmegs and Alum, Salt of Wormwood, Salt of Tartar, Salt of Wormwood and Spirit of Vitriol, Arcanum duplicatum, and the like, too tedious to mention, are useful.

I have often known that external Applications have been of Use in these and other remitting Fevers, when the Bark cou'd not be taken, but cannot say, that ever they succeeded in Adults, or in such whose Fibres were strong : Nay, I have seen them effectual in a Quartan, which is found to be as stubborn as any of the intermittent

mittent Kind ; for a Son of mine, who, tho' very young, was afflicted with a Quartan, was cur'd with a Plaster made up of Cinnabar, and Turpentine apply'd to his Stomach and Wrists ; he was cur'd in the same Manner a second and a third Time, without premising any Catharticks, or other Evacuations : Nor was this the only Instance I have found them successful in, as I took Notice some Years ago in the *Criticon Februm* ; and to say the Truth, this gave me the first Hint of making Use of Cinnabar internally in a Failure of the Bark ; and since this Medicine does plainly act by its *Pondus*, there is Reason to suppose that Chalybeates wou'd also have a proper Effect in intermitting and remitting Cases ; and in Fact, the Decoction of the Bark chalybeated, or an Infusion of Bark with Steel proves more effectual than the Bark alone, in many stubborn intermitting Cases especially. This *Pondus* attenuates Viscidities, as Moderns and antient Physicians also have observ'd. Let us look into *Sennertus*, p. m. 502. and we shall find him giving in Reasons for Steel's curing hypochondriack Obstructions—*De modo autem, says he, quo ferrum & chalybs in hoc affectu prosit, sunt variorum*

78 *Practical Observations on the*

*variorum authorum variae sententiae; dum alij pondere partes obstructas permeare & ita ab infarctu liberare—statuunt.—*This

Manner therefore of acting is not a late Invention, but renew'd, and justly too: And therefore the Notion of the Cause of the Accessions proceeding from *Viscidities*, is confirm'd from the Nature of the Cure: Where then we find the Bark slow in its Effects, or suspect it will, and these two Years past, this has been the Case, these Applications are advisable, in order to hasten the Cure. One Difficulty remains concerning these *Viscidities*, which deserves Mention; namely, How should *Viscidities* obtain in a Blood too much rarefied? For in Fevers depending on such States, the Blood is always too thin, and such Fevers are always burning and ardent; but if we take the whole Context of this Discourse into Consideration, we may readily enough conceive, that tho' the Blood, when thoroughly concocted and dissolv'd, may be thin and acrimonious enough, which yet whilst the Salts are implicated, and wrapt up in *Viscidities*, is respectively gross and thick, and obstructive; and one Difference may be observ'd between these Fevers from acrimonious

monious Blood, and those from a grosser and more phlegmatick State, that the Horrors are less and shorter in the former, than in the latter ; and the Heats are more intense and durable ; as are also the Sweats. How far other Applications may be of use, I think it not worth while to mention ; for surely, if this be of no Use, I can't see how others less effectual can do much Service : I have indeed seen the Bark externally used, but to what Purpose I can hardly conceive, since most of its Parts are too fix'd to enter the Blood, perhaps the *Hellebor*, which was blended along with it, might have a good Effect ; for I understand, the Patient recover'd : And as this Year has convinc'd us of the Bark's Inefficacy, we shall be obliged to have better Bark imported, or to cure in the *rational Manner* intirely.

WHERE Symptoms are produced after the Bark has been given for the Fever, and after it has had its Effect, it plainly appears the Fever is not abolish'd, but has chang'd its Type. I know a Gentlewoman who having relaps'd frequently, and being as often cured, fell into an Ischiadick Pain, and which was partly lumbaginous also : Bleeding gave some Relief, and Physick given and repeated

repeated thrice, took off the Pain; but the Quartan return'd in its former Type. Any Commotion rais'd in the Blood, will now reproduce a Fever cur'd by the Bark, and even endanger a Relapse into one, altho' cured in the rational Method. I believe this one Instance sufficient to convince us, that the Bark is not now so effectual as it was heretofore; and therefore not so good as it was formerly: For some few Years ago, if the Bark were given regularly, and to a sufficient Quantity, that is, if one Ounce took off the Fever, we ought to give two Ounces more; then whatever Disorder, suppose a flatulant Colick, from making too free with Fruit, happen'd, which required one, two or more Doses of Purging Physick, these Commotions did not then cause the Fever to return; but it is not so at this Time, where the Bark lets go its hold, not only by a Dose of Physick, but even upon the least Change of Air, Relapses are complain'd of. An Air more productive of Fevers, and Bark less effectual than formerly, make People of tender Constitutions very subject to Returns; which to prevent, is very difficult, unless Patients will be obedient to our Commands. I have already observ'd,

serv'd, that which cures, will prevent ; and if the Bark is so effectual as to take off these Fevers, we must continue to make use of it Morning and Evening, till we have recover'd our Vigor and natural Strength : If this Time cannot be determin'd, I think it advisable for such Patients, who have once experienced a Relapse, not to trust it a third Time ; but after their Fever is taken off, let them for three or four Months proceed to take, Morning and Evening, a Draught of an Infusion of the Bark and Steel in Wine.

J A U N D I C E S in a Fever are always look'd upon as a fatal Symptom, denoting an Inflammation of the Liver ; and Jaundices are now very common, after the Cure of these Fevers ; and it is easy to account how they happen, because any Styp-tick Remedies will obstruct the Passages of the Liver, and introduce a Jaundice ; but moreover, if the offending Juices are lodg'd on any Part, by arresting the Circulation, or by a translativè Crisis, which may happen in Fevers half cured by the Bark, because Part of the Matter being lock'd up, the Spirits dispose of the Remainder by a Sort of Translation ; upon either Account, Jaundices may ensue : And moreover, it is

not to be wonder'd at, that such cohering Blood, as most People now have within their Vessels, should be obstructive. I hold it not safe, to trust to Aperients in this Case : Bleeding, Emeticks, and Catharticks, ought to precede them, because such a Quantity, as the Liver holds of deprav'd Juices, must be discharged from the Blood-Vessels before we pretend to alter : I don't however pretend to suppose, that these Discharges empty the Liver itself immediately, but they make a Discharge from the Blood-Vessels, and prevent a further Influx, and in great measure forward the Circulation by the Shock they make. I must desire you observe one thing, in regard to Aperients of the Liver ; namely, Steel, or any Chalybeate whatever, must be cautiously administer'd in Obstructions of the Liver, which is much in Danger of turning Scirrhus. I know a certain Gentleman in a late Treatise approves of Chalybeates against a *Scirrhus* of the Liver ; which is contrary to good *Authority*, contrary to *Reason*, contrary to his *own Sentiments* by a necessary Inference, and contrary to *Experience* : First, it is contrary to good Authority, for *Waldschmidt* advises against *them* in a Scirrhus

thus of the Liver *; and says they harden it more: It is contrary to Reason, because it is a Practice well known to give Chalybeates in a lax Habit, in order to evaporate the Water, and to restore thereby the Elasticity of the Fibres; but as soon as we have done this, if we administer them any further, we shall render them rigid; for Rigidity is when an elastick Fibre becomes too inflexible by its Hardness, as *Joel* observes, where reckoning up the Detriment we receive by too large a Quantity of Chalybeates, he tells us, they give dry Gripes, a Driness of the Tongue, and of the *whole* Body, and continual Head-achs; which are cured by sharp Glysters, by frequently drinking Goat's Milk, and by frequently eating fresh Butter and fat Broth. *Thirdly*, it is contrary to the abovesaid Author, elsewhere we find, to amend the lax Habit, he gives Chalybeates to help it: And, *lastly*, it is directly opposite to *Experience*; for I have known two or three Instances, where com-

* Interponi debent Chalybeata, nisi jam Scirrhus Visceris adsit, In tali enim duritie Chalybeata plus nocent, quia nimis exsiccant; hinc in macilentis & tempore aestivo Chalybeata non semper tuto exhibentur. *Waldstbmidt de Obstructione Hepatis, Cas. 36. p. 76.*

mon Jaundices were hurried into Scirrhus's by a Practitioner who was fond of Chalybeates in all Jaundices: Great Men should take Care how they propagate Errors.

WE ought to be particularly inquisitive into the Constitution of the Patient we are to attend; and as we know what Patients, we are always us'd to, can bear, so it remains, that every new Patient we are call'd to, shou'd give us a Detail of what he has an Aversion to, that a good Remedy may not be discredited: These two last Years being so remarkable for remitting and intermitting Fevers, and Relapses, have given us a greater Insight into the Failure of the Bark, than we have ever yet had; for besides its Inefficacy, we plainly see, that scarce seven or eight in ten can bear it; indeed, I can't say whether this may not depend on the Bark's being either decay'd, or not genuine: However, it is not our Business to insist upon the Cure of the Fever by a Remedy, which neither abates the Fever, nor agrees with their Constitution.

I was call'd to a Gentleman who had been cur'd by the Bark, and who upon eating some cooling Herbs, and drinking too watry and cool Liquors whilst he was hot, fell in-
to

to a violent Colick : It was evident by the Pulse and Heat, as well as his Thirst and Sweating, that a Fever was the Occasion of all this Pain ; but I had also Reason to fear an Inflammation upon the Intestines, because the Pain was fix'd, there was felt a Pain upon pressing the Abdomen, and nothing administred wou'd pass: Upon the whole, I cou'd not but see what was the Cause of all this Disorder, namely, the Fever had for some time lurk'd within, and upon any other Cause whatever it would have broke into some other Shape ; but the Diet being too cool for the Bowels, it caus'd the Fever to point there. At first View indeed, I hop'd it was a common Colick ; but upon strict Inquiry of the Patient, and from them alone we receive the best and most genuine Accounts, both as to the Causes and the Order of Invasion, I found the Bowels begun to be inflam'd, and the Fever was about to unload its whole Cargo upon them, if timely Assistance were not given ; whereupon I order'd Blood to be taken away, to abate the Influx of *it* into the Bowels, which wou'd have brought on at last a Dysentery, as has been often experienc'd upon the like Case ;

and for the Costiveness I order'd Draughts of *Syr. e Ros. Solutiv.* and *Ol. Amygd. d.* to be taken every third or fourth Hour, till they answer'd, or if they were return'd, to repeat them immediately ; whereas very strong Physick and Glysters did not answer the End before, these Draughts rais'd a *Diarrhœa*, for which I was afterwards oblig'd to order a Mixture of *Aq. Lact. Alex. Cinnam. fort.* and *Confect. Fracastorij*, and thus we promoted Stools sufficiently, and yet kept them under. I have also observ'd, that in obstinate Astrictions, where the Bowels were dry, and Inflammatory Colicks invaded the Patients, that strong Catharticks were far from promoting the Dejection, and that oily Medicines seldom or never fail'd. Having gain'd our Point, the Sweats came on plentifully, and as now the Urine had a laudable Sediment in it, I encourag'd them by Volatiles join'd with the testaceous Medicines ; till finding some Danger might ensue by the Patient's Uneasiness under them, who was willing to rise in the midst of them, partly from an Apprehension that they wou'd weaken him, and partly because the Heat of the Weather made them almost intolerable, I resolv'd

to attempt another Method, which might not carry so much Hazard along with it, and which I the rather undertook, because I found few Sweats at last issu'd forth, without the Assistance of Diaphoreticks; so that it was really in my Choice which Discharge I wou'd make; I therefore chose the least troublesome, making some small Preface for the Method I was about to pursue; I told him that now his Urine settled very well, and that was a Sign the Fever was ready to go off, or, however, might be safely carried off by any moderate Discharge whatever; that I found the Sweats were troublesome and weakening, and that tho' he apprehended the Excess of purging a few Days before, yet he saw himself agreeably disappointed, and that those Discharges were in our Power to curb, when timely Assistance was afforded; which when he agreed to, I told him I wou'd now finish his Cure by a gentle Cathartick or two, with the same Security and Success; that whereas the Purging before was both wished for and fear'd; but now it was wish'd for; and accordingly I order'd him Physick, which wrought gently, and abated the Fever very much, which was quite taken off by ano-

ther Dose, giving each Night after the Physick, a gentle paregorick Draught to allay any Commotion that might be rais'd : After which a bitter Infusion with Spaw-water recover'd his Appetite, and the Air restor'd him perfectly to his Health : I forgot to mention that his Colick Pains return'd sometimes with Violence, and oblig'd me to prescribe a Draught with *Philonium Romanum* in it, and to repeat it upon any great Return of the Pain, which however he did not make Use of above twice : I believe it might have been possible to have taken off this Fever by the Bark, but having relapsed into the same Fever, which the Bark took off before, I was unwilling to give it against his Inclination.

It sometimes happens, you see, that *Chicaneurs* have a fair Opportunity of shewing their Spleen, and it were to be wish'd that they never did make such a perverse Use of their Skill ; where two Methods may be brought into Practice with equal Advantage, such an Assistant will sily give you the Honour of the first Choice, that he may have the Opportunity of taking the latter ; and as his will equally succeed with
yours,

yours, he takes a decent Care to publish the Difference of Opinions after his own has succeeded, that the World may be persuaded his Sentiments were embrac'd, and that the Cure was owing to his Skill. Every Man has a Title to defend his Honour against the Snares of such Wretches by prudent Measures; wherefore when you see such an Ambiguity of Methods, prevent such Reptiles Designs, by giving a short Detail of your Sentiments; let them see you are appriz'd of both Methods, and that it is very indifferent which Road they take, since by either we shall attain the wish'd-for End with equal Safety, and in the same Space of Time: It is a pity but such Creatures were discarded from the Rank of so honourable a Profession.

BLISTERS are always used, and with good Success, in slow Fevers; but few have remark'd how, or in what Manner we ought to apply them. Most unwary People seeing Blisters agreed to, think they may apply them indiscriminately; concluding, that if one does good, more will complete the Cure; and thus the Patients may often be said to escape, rather than to be cured: Much in the same Manner is it with those whose
Blood

Blood wants to be attenuated ; and because they know the general Indication is Attenuation, they give too large Doses, or too frequently of attenuating Remedies, till they render the Case desperate. I shall enforce the Belief of what I advance, by giving a few Examples. The Effects of Remedies must be known ; we must be skill'd in the *Materia Medica*, in order to do good. I find by Appearances, for Example, that a Patient labours under a Disease where the Blood is cohesive and phlegmatick ; and therefore, I prescribe proper Attenuants to dissolve it : When I have taken off the Cohesion, and have dissolv'd the Blood, which will best appear by the Symptoms being entirely vanquish'd ; if an Apothecary should encourage, or the Patient push to go on in the same Method, by which they had found Benefit, it is not only possible, but certain, that this Excess is never done with Impunity ; for the Nature of Attenuants is first to dissolve, and then to incrassate ; therefore, it is not always the primary Effects alone, but the Quantity also must be consulted. If in rheumatick, but slow Fevers, or in gross and volatile Blood in Fevers, we give Attenuants, the
Patients

Patie
and
too
by t
them
Dilu
with
as the
Casto
the n
fician
Atten
have
we n
achs,
will e
cess
decla
out o
thod
necess
how
would
medie
stroy
Man
the T
a Soli

Patients turn thirsty, and become delirious, and the Urine loses its Sediment ; by being too hasty in this Case, we ruin the Patient by thickning his Juices more, and making them stick every where : Gentle Warmth, Diluents, and testaceous Remedies, blended with *Sal Prunella*, prove effectual ; whereas the volatile Attenuants, *Serpentaria Virg. Castor*, and such like, are detrimental, as the next Visit will amply inform the Physician. Steel is one of the most effectual Attenuants for gross Blood ; and yet, as I have elsewhere made you see in these Sheets, we must proportion its Quantity, or Headachs, Thirst, and Driness of the Tongue will ensue. Wine is a Cordial that by Excess will overwhelm the Spirits. I must declare, that I have seen Patients hurried out of their Lives by an Excess of a Method that was just in itself : Judgment is a necessary Requisite for Practitioners ; or how should it happen, that a Physician would cure with the very individual Remedies with which an unskilful Person destroys : Brandy Spirits will raise a drooping Man ; but if continued, they will destroy the Texture of the Blood, and turn it into a Solid, as appears by those Concretions in
the

the *Aorta* of Spirit-Drinkers, which are mistaken for *Polypus's*. We have liv'd to see the ill Effects of the low and despiriting Diet, advised by a late and learned Physician: Some, to whom it was truly useful at first, having persisted in it, till they have been surpriz'd with Cachexies, Dropsies, and a Proneness to Catarrhs and Asthma's;

— *Sunt certi denique fines,*

Quos ultra citraque nequit consistere rectum.

I hope these Examples are easy, and granted by Mankind: From hence therefore may Rules be drawn for the Application of Blisters in slow Fevers: Symptoms and Diseases are not to be cured; their Causes, whatever they are, are only attack'd; for a Symptom is only a Part of a Disease, and a Disease is the immediate Result of the Cause; a Symptom denotes the Cause in part, and Signs denote the Disease fully; we only make use of these Symptoms and Signs for coming at the Cause, which is not cur'd but by regarding the Quantity, Quality and Motion of the Fluids and Solids; and whether this Cause be such as we imagine it to be, or it be purely imaginary and fictitious, so long as such certain Symptoms and Signs demonstrate such Faults in Quantity, &c. and indicate such Remedies, it is not pertinent to dispute

dispute about the Existence or Non-Existence of such a Cause : Suppose an Acid to be the Cause, and Remedies that destroy Acids to cure the Patient ; it is not worth our while to cavil, whether an Acid was or was not the Cause, so long as those Symptoms and Signs, which we supposed to proceed from an Acidity of the Juices, deposited on a certain Part, are reliev'd by Remedies, which, as Experience informs us, make such Signs and Symptoms to disappear ; and the same Experience instructs us also as to the Quantity to be given, whether we hit upon the real Cause or not, so as to be for the most Part infallible : Now Experience teaches us, that Blisters are to be apply'd in slow Fevers, of any Kind, as the Symptoms require ; if, for Example, the Pulse be weak, the Heat moderate, the Urine pale, the Patients be delirious, and have petechiæ upon them, we are to apply Blisters, which are found to strengthen the Pulse, to heat us, to give a higher Colour to the Urine, to turn the Purples to a Red, and to abate this Sort of *Delirium* : If two Blisters do only abate these Signs and Symptoms, we are then to proceed to apply more, after having observ'd the Effects of the first : If these succeed, yet still somewhat remains to
be

be taken off; at a proper Distance apply more; but if we postpone this Rule, we may at once raise the Pulse to so high a Pitch, advance the Heat to such a Degree, and bring on such Commotions, as may overwhelm the Patient.

It seems very surprizing, that any * Gentleman, who wrote on Fevers of the worst Kind, not much above Forty Years ago, should never make the least Mention of Blisters in them, when there are many Histories in his Book which seem to require their Use; and for the want of which his Patients must have suffer'd: In his Seventh History, we hear of one who died Comatous, whose Pulse was quick, frequent and small, whose Tongue was dry, and who had small and black Spots upon him; and yet no other Efforts were used, besides a little Cinnamon, and some other simple Waters; neither did he use testaceous nor volatile Medicines: And yet their Effects were known long before, every where.

It is somewhat remarkable, that Women are seldom so subject to *Deliriums* as the Men; and that they are more readily assisted when they are so affected: If we consider that there is a Difference in the

* Donckers.

Make of the Vessels, we shall conceive how all this happens; for the descending Trunk of the *Aorta*, at the Iliack Division especially, is larger than that of a Man's: And in Men the ascending Trunk is larger than that of a Woman's of equal Size; so that the Blood runs with Ease downwards in Women, and with less Resistance upwards in Men: Hence are Men more subject to have too much lodg'd on the Brain, and Women more liable to Fluxes of Blood; Revulsions therefore profit Women more, and remove such Deliriums, whenever they do afflict them, much sooner than in Men; and moreover, they being naturally of a more lax Habit of Body than Men, Blisters do them less Harm, and more Good.

WHERE Women in Child-Bed are seiz'd with a Fever, the Lochia are suppress'd, and a Diarrhœa succeeds, we are cautious how we proceed; for so long as it goes forward gently, it serves as a *Succedaneum* for the *Lochia*, and in that Case we ought to be Spectators; for as when no Discharge succeeds a Suppression, an Inflammation most commonly follows; so when a *Diarrhœa* ensues, those Parts, which would have produced this Disorder, are carry'd off into another Channel, and the Womb is not so much

much in Danger of being stuff'd up with Humours; wherefore, such a Discharge is a Sort of a *translative Crisis*, and it is next to being natural: But if this *Diarrhæa* should prove immoderate, and a Fever should reign at the same time, it is a dismal Case, and very rarely succeeds; for a Translation itself is but doubtful, and much more ought we to apprehend an Exhaustion also: A moderate Discharge throws off those Acrimonies, which should have been carried thro' the *Uterus*; but those sharp Humours irritating the Glands of the Intestines, violently turn the whole Bent of the Humours that Way, and to such a Degree, as scarce lies in the Power of the Physician to relieve, as I have often experienced: The *Uterus* therefore is not so sensible of these Acrimonies, as the Intestines; and therefore does it suffer less by them than these: This we perceive by daily Practice; for tho' the *Uterus* oscillates upon such Humours irritating it, and therefore throws off what is offensive to it, as appears in the *Fluor Albus*, its parting with *Mola's*, and in Births; all which are Consequences of a Body stimulating the Coats of the *Uterus*, and causing it to contract strongly, and to throw

throw it out ; yet we all know how long it will bear Ulcers, and other great Diseases, ere it bring the Patients to their Graves ; whereas the Intestines cannot be greatly prejudiced, but the Patient is fatally affected ; nor can they bear any great Discharges, especially in Fevers ; but a few Days will determine their Fate : In this Supposition, we are not to aim at suppressing the *Diarrhœa* intirely ; for then it recoils upon the *Uterus*, and inflames it ; and if we don't administer Aperients and Hystericks to open the Obstructions of the Womb, as well as apply Emollients externally to the *Abdomen*, if any Part of the Humour runs into it, in order to make a Passage thro' its Glands, it will inflame : But these Aperients have an Effect of promoting the *Diarrhœa*'s as they irritate ; and the Opiates and Astringents purse up the Glands of the *Uterus*, and hinder the Efforts made to open a Passage that Way : Mean while, both are necessary ; for the Patients will die as well of an Inflammation, as a *Diarrhœa*, and as quickly too ; wherefore, as the Danger is equal on both Sides, we must not postpone either ; for *Castor. Pulv. ad Guttet. Sal. Vol. C. C. Sp. & Tinct. Castor. & Croc. Myrrh,*

Affaetida, Gum. *Ammon.* *Galban.* and such like, must be blended with Opiates and Stypticks; and a Regard must be had to the Fever by Alexipharmacks, which don't encrease their Thirst, and by Blisters, if Occasion require; and the Prescriber must be nimble in his Procedure, or he loses his Patient, who is in the utmost Danger, and ought openly to be declared so; and who is very rarely sav'd, take what Care we please, or have what Skill you can to relieve: These *Lochia* then are of a very virulent Nature; they are the *Menstrua*, which have in *good measure* stagnated in the *Uterus* for some Months, and which serv'd to dilate its Coats to a large Size; and we all know, that Blood stagnating any where, raises wonderful Changes: I say they are Fluids, that have in *good measure* stagnated, because there is no Question, but the main Channel of the Vessels of the *Uterus* are passable, or all Women with Child would have Inflammations of the Womb; but the Blood's passing thro' the Middle, does not prove that some Parts of it are not congeal'd, or don't stick to the Sides of the Vessels, till their full Time; when the *Placenta* being taken off it runs out at innumerable Orifices into
I the

the Cavity of the Womb, and is discharged thro' the *Vagina*; and wherever Blood or Humours grow gross, and stick any where, they turn acrimonious, and sometimes corrosive, as appears, when by their Discharge we have seen Erysipelas's, and commonly Excoriations, rais'd round the Parts: For Blood that is gross and volatile, coheres, obstructs, inflames, and ulcerates the Parts internally and externally also.

THERE is an *Anxietude* which depends on Humours lodging on the Coats of the Stomach, or rather in them; it causes them to toss from Side to Side, nor can they be easy in any Posture; the Stomach feels to them full and hard, and sometimes they have a small Heart-burning: Altho' this Symptom generally attacks the Patients at the first Onset of the Fever, yet if it has not been regarded at the Beginning, it continues, and moreover brings on Hiccups, Swoonings, Headachs, and Vertigo's; all which Symptoms are readily reliev'd by an Emetick and Glysters; for as the Cause resides in the Stomach, this either sets the Humour lodg'd into the Circulation, or forces it into the Glands, and discharges it: Moreover, an Emetick prevents the Consequences,

H 2

ces, namely, a fatal *Diarrhœa*; for as the Humour is plentiful and irritating, it forces its Passage into the Intestines, and the Fluxion being violent, is very difficult to be remedied; wherefore in such *Diarrhœa*'s themselves, if the Strength of the Patients will allow of it, an Emetick is at that Time also beneficial; it revulses and evacuates, and prepares the Way for testaceous, styp-tick, and opiate Medicines; we must not forget to throw in Cordials and Alexipharmacks, to raise the Spirits, and promote the Crisis, which is always much retarded on such Occasions; for as a Crisis depends on a certain Degree of Attenuation of the Juices, as well as on a sufficient Quantity of Spirits, to accomplish this Work; there being too great an Avocation of the Spirits, or rather a Consumption of them, the other Work of Attenuation must fail of Course; since it is by the Force of the Spirits that the Blood is hurried forward in the Vessels, and Concoction depends upon a certain Degree of Motion and Attrition of the Fluids.

As for *Sweats*, so soon as they become Critical, they must be promoted, and even whilst they are moderate in the beginning, we ought to let them flow; because in the latter

latter Case, they serve to unload the Vessels, and are in lieu of Discharges we would otherwise make; and in the first they decide the Struggle, and terminate the Fever: In either Case we must be cautious, and neither load the Patients with more Cloaths, nor give them too heating Cordials: There is a middle Way, which we must attain to, and follow. For my own Part, I know nothing so effectually to promote Sweat, and keep it on Foot, as warm Liquors taken in a plentiful Manner; so that small Sack-whey, thin Chicken Broth, small Tea, thin Gruel, are justly reputed fit for this purpose: The Blood being diluted, does most readily part with its fierce Salts by Urine and the Pores; and they who labour under Fevers, and cannot drink as plentifully as the Nature of the Fever requires, escape more hardly: Two Quarts are generally allow'd in the slow Fevers, of Liquors moderately generous; and in the warmer Kinds, a Gallon of small scarce suffices in twenty-four Hours; for in any Fever whatever, Dilution is a standing Indication; because as the perspirable Matter flies off plentifully in every Fever, it ought to be supplied, or the Blood will turn solid, and stagnate. This we fre-

quently meet with in rheumatick Fevers, where, without Dilution, and with heating Remedies, the Tongue grows dry, Thirst ensues, the Patients grow hot and delirious, and Blisters do but augment the Driness of the Blood; and in lieu of taking away the Delirium, make the Patients comatous, by forcing the Blood deeper into the Capillaries of the Brain.

THERE never was a Season, when *Apoplexies*, *Palsies*, and other Obstructions of the Nerves did prevail so much as they do at present, and have done for some Time past; I have indeed heard, that these Distempers were periodical, and attended Fevers; this I can't positively affirm of my own Practice; however, it is possible a Fever Fit may throw these gross and coherent Humours into the Brain and its Appendages: And I remember to have been call'd to one in an Apoplexy, whose Pulse was feverish and high, but had no Opportunity to find out how it invaded the Patient, and being late call'd, it was impossible to pronounce, whether the Obstruction or Fever were original; or whether the Fever were not secondary: This Symptom denotes, or however, confirms us in the Sentiments

timents we have hitherto asserted, that the Blood is gross, and apt to stick in the smaller Vessels; Strokes of Apoplexies depending on this Viscidity impacted for their ordinary and usual Cause: All the Remedies, made use of to cure it, witness for it; the Revulsions, of Bleeding, in Proportion to the compound Cause, namely of the *Impetus*, and of the *Quantity* of Blood in the Vessels, or the Plenitude, of Catharticks, of Blisters, to rouse, as well as to revulse, of Cupping, of Issues, of Glysters, and such like: These Revulsions, I say, regard the Prevention of an Influx of more Matter into a Part, which is already too much loaden, and ready to burst with an Inundation of Blood; and these, if timely made use of, I have often found effectual, so as to leave only a Stupidity, a Staggering in walking, and a small Degree of *Delirium* behind, which by repeating these Discharges at proper Distances, and by giving Volatiles alter'd and suited to the Patient's *Gout*, along with *Sal Martis*, or some such gentle Restringents, yielded, and my Patients have been thereby plac'd in Safety: Before Artificers can empty a Channel that makes an Inundation, they must

divert the Source, then fall to Work to discharge the Waters lodg'd; and lastly, they must strengthen the Banks. What is Revulsion but this Diversion? What is this Discharge but the Volatiles, which push the Blood forward in the Vessels, and restore the Circulation of the Mass. And lastly, this strengthening of the Banks of the Channel, resembles our Stypticks, which corroborate the Vessels in such a Manner, as to take off their Laxity, by which they give Way beyond their natural Tone, so as to lose their Elasticity, or recoiling Power, the natural Consequence of which is a Stagnation; for as soon as this Property of a Vessel is lost, all the Juices that arrive, are receiv'd, but never reconvey'd: And every one, who is but moderately skill'd in Anatomy, must know, that if more is brought to a Part than can be dispers'd into the succeeding Vessels, that Part must of Course swell, and perhaps the Vessels will break, which is really the Case in incurable Apoplexies, and which are properly the strong Apoplexies the Divine *Coan* speaks of. The Compass I aim at, does not permit me to descend to further Particulars, or I could give the Reader some remarkable Cases on this Head.

A great many have been subject, particularly last Autumn, and this Summer, to *Diarrhæa's*; which have taken their Rise from Patients indulging themselves in the too liberal use of Fruit: We are to consider whether these can be born, whether they be Symptomatical or Critical; for I have seen them Critical, but exceeding their natural Bounds; I have also seen them Symptomatical, but not sufficient; and I have seen them Critical, and insufficient: I have observ'd them critical and sufficient; and I have observ'd them symptomatical and excessive; and lastly, I have found them symptomatical, and yet beneficial. As all these different States require different Managements, I shall be as particular, but as brief, as I possibly can. If *Diarrhæa's* be symptomatical, they are known, because no Concoction or Sediment preceded in the Urine; and if no Discharges have been made before you were call'd, if they be very moderate, and the same may be said if they have a good many loose Stools, and their Strength does not decay thereby; they ought in the first Case to be encourag'd by a Dose of Rheubarb or two, because there are few Fevers that don't admit of some Discharge in the Beginning;

ning ; their Weakness at that Time depending mostly on an excessive Quantity of deprav'd Juices, not on the Scarcity of Spirits. I know not how far this Advice may be relish'd by some ; but I assure them, it stands good in Practice ; and there is good Reason, that a redundant Cacochymy should be evacuated ; but if it be symptomatical, and may well enough serve for a Discharge, that is, if it be moderate, and does not weaken the Patient, we have no Reason to find any Fault with the Quantity, since it supplies the Part of a Dose or two of Physick, which we should otherwise have attempted ; only we must take Care to support the Spirits with Cordial Bolus's, made up with *Pulv. e Chel. C. C. of Lap. de Goa, Contrayerv. Corn. Cerv. Calcinat. Alcherm. &c.* and with *Juleps of Aq. Lact. Rut. Ceras. Meliss. Menth. Epidem. Cinnam. Mirab. &c.* till a sufficient Discharge be made ; and then it will be necessary to curb it with a Mixture of *Conf. Fracastor.* in simple and compound Waters, which, when finish'd, you are to have regard to the Fever only, as is required by the Circumstances : Or if you find them symptomatical intirely, so that the Patients are injur'd by every Stool

in

in their Strength, or so that they faint after each Stool : In this Case, we must support the Animal Spirits, and suppress the Diarrhœa with all our Art : To the Cordials already mention'd, we may add volatile Spirits ; and to the Mixture of Dialcordium we must add a Bolus made up of *Terra Japonica*, *Croc. Martis Astringens*, *Coralium Rubrum*, *Conserv. Rosar. Rub.* sharpen'd with *Ol. Vitrioli* ; and moreover, a Revulsion may be made, which I have often found successful in the like Case ; namely, the Application of a Blistring Plaster or two to the Calves of the Legs, give a Turn to the Humours, and invigorate the Patients : The Pain and Discharge have a very good Effect. The greatest Instance I had of this Kind, was in a Gentlewoman recovering from the confluent Small-Pox, whose Diarrhœa could not be suppress'd by all the strongest Stypticks and Opiates, till I apply'd Blisters to the Legs, which, by their running plentifully, diverted the Stream, and then the Stypticks and Opiates succeeded according to our Wishes. If a *Diarrhœa* be critical or useful, and be too sparing in its Quantity, as will appear by a permanent Sedi-

Sediment in the Urine, and yet no Advantage accrues from it, it is lawful, and even expedient, to promote this Diarrhœa, by giving a Dose, or even two or three Doses, at proper Distances, of Rheubarb; with this Caution, that wherever Patients are taken with a Diarrhœa, and you are oblig'd to promote it, half a Dose in that Case will be sufficient; because as it is already on float, a gentle Irritation serves to perpetuate the Motion, and this is a general Observation in all Discharges of any Kind arising from Irritation. If the Flux is critical, and will be sufficient for the Purpose, and will serve to carry off the morbid Matter without endangering the Patient's Life, we are to look on, and suffer it to go forward: But if what at first was Critical, shou'd turn at last Symptomatical; for Excess overthrows Nature; then we are to proceed in the Use of Stypticks, Opiates and Cordials, till we have conquer'd it. It is not easy to guess at the Quantity some very thin Persons will bear, and in such a Case, I would advise the Attendant not to be too hasty in suppressing such a Diarrhœa, where he finds that the administering of

Re-

Refringents raises Tumults in the Bowels, and puffs 'em up excessively, or where he finds the lessening it confuses their Heads; for such Symptoms denote a Tendency downward to be an Effort of Nature; in this Case we are to judge from the Effects, and we are only to give so much of the Refringents as will keep the Flux within Compass, and suffer it to run as much as the Patient's Strength can bear: Here I must confess a Physician has a difficult Task upon his Hands; where if he does not suffer this Inconvenience to go forwards, he hurries on a Train of as bad, if not worse Symptoms; and if he does, the Patient is brought to the Brink of the Grave; and Judgment only can inform us how to compass the blessed *Mean*: Judgment I say, which is guided by the Relief or Detriment receiv'd, and this requires an unwearied Diligence in the Discharge of our Duty, in which Affair trust no one's Relation.

THIS Fever is as subject to leave Remains, as it is to Relapses; and I have frequently observ'd Hecticks, Pains, Watchfulness, Hysterical and Hypochondrical Symptoms,

toms, Dejections of Spirits, nocturnal Sweats, Eruptions, &c. and many such like Disorders behind it; for it being slow in its own Nature, the critical Efforts are generally trans-lative, sometimes excretory: The Spirits in such a Case are either exhausted, or were few at the Invasion of the Fever, and never were well supported during the Course of it; and therefore the Blood is charged with the morbid Matter, which the Spirits don't throw out with any Force, but it is gradually deposited in some one Part, and by stopping there, produces either slow In-flammations and Abscesses, or Pains or E-ruptions, or some such Disorders. We are to observe, whether the Symptoms be the Effect of Inflammations, or of Irritations, or of a mix'd Kind; that is, we are to consider whether the Blood be thick by some con-gealing Substance, or by Evaporation of the humid Parts of it; or whether it be render'd sharp by a Retention of some of its unna-tural Salts; or whether both these Faults don't concur: In the first Case, either Tu-mours of the cold Kind appear, or Inflam-mations; in the second Supposition, *Colli-quations*, namely, Sweats, Fluxes, and such like,

like, succeed the Fever, or *Convulsions*, or, in short, some Effects of Stimulation. In the first Case, we are to consider the Species of Grossness of the Blood; if it be what the Ancients term'd a cold and gross Humour that obstructs the Vessels, that is, if it be a phlegmatick State of Blood that reigns, then a white and pitting Swelling attacks the Legs, and creates an *anasarcous* Tumor of them; and these Relicks must be attack'd with Mercurials in Catharticks, given at such Distance, and to such a Quantity, as will take off the Swelling; after which, we must prescribe bitter and chalybeated Wines to be drank upon Bolus's of Cinnabar, Æthiops Mineral, and Conserve of Rosemary Flowers, for a Month, or more; which will have the Force of attenuating and dissolving the Cohesions, till they bring 'em to a natural Consistence: But if the Blood has become gross by the Sweats, or large Quantities of Water made, and is thereby thicken'd, it sticks in the lymphatick Arteries, and creates Pains and Inflammations; for such Blood is not barely viscid; it is also saline, and therefore does not barely stick in the Vessels, but also huffs and expands itself, and
raises

raises Inflammations, which are succeeded by a symptomatical Fever; and I have often observ'd this inflammatory Disposition after Fevers: The Physician need be at little Pains to discover it, because if he, upon Inquiry, finds that Pains in the Bowels, for Example, have preceded a feverish and hectical Heat, let the distance between their Appearance be short or long, this Pain is the Cause of this Heat, and will be follow'd by a Fever, if it is not already attended with one: In which Case, we must draw off such a Quantity of Blood as will abate the original Complaint; which I have often seen done with a very small Quantity, if the Complaint chanc'd to be recent; but if the Patients have neglected themselves, or if they have been ill treated, once Bleeding seldom completes the Affair, and sometimes the Viscid is so deeply impacted, that Bleeding little avails: I say not this to encourage the Omission of this Discharge, but because I have been often call'd, when they have deferr'd it, till it became useless; as it may easily happen, where the Blood has been lodg'd for a considerable time, for then it begins to impostemate; and indeed there is no recalling it then: When we have abated the Pain, our next
Inten-

tion must be aim'd at opening the
struction in so gentle a Manner, as that
the Blood may not be too violently mov'd,
so that Aperients must be blended with
watry Liquors, and must be given warm.
Nothing is a better and more effectual Re-
medy for opening these inflammatory Ob-
structions, than Nitre given in Water;
wherefore, *Fuller's Decoctum Coccineum*,
given gently warm, is a very good Medi-
cine: Salts are best dissolv'd in warm Wa-
ter; so that even Cream of Tartar will be
dissolv'd in that manner; and as the Salts of
this Viscid raise all these Tumults, the Wa-
ter melts them down, and the Saltpetre has
contrary Effects; so that the Viscid becomes
dissolv'd, and is in a fair Train of being
wash'd off: In this Case also, the Chaly-
beate Waters of the mild Kind have a
Quality in them to soften the Coagulum, so
as to melt it into a Fluid, and to open Ob-
structions gently; wherefore are they much
in use, in Case of a hectical Heat, rais'd
from slow Inflammations; such as this Fe-
ver usually produces. This is generally
the Case of Coughs at the End of a Fe-
ver; the gross Parts of Blood are engaged
either in, or at the Glands, where it lies

and gives the Patients a Difficulty of Breathing, and at the same time a Cough, when they are incessantly tickled, but are not able to spit up any thing : If they think fit to neglect this Symptom, it infallibly hurries them into a fatal Consumption, an Instance of which I very lately saw. The Method of Cure of such Coughs is by Bleeding, Epispasticks, gentle Catharticks, and Issues, in order to divert the further Separation of such Matter into the Lungs, by watry Liquors and Emulsions, Sal Prunellæ, Chalybeate Waters, and the like, to restrain the Blood's Motion, to dilute the sharp Salts, and to thin the Juices ; and lastly, Opiates are levell'd at the great Irritation, than which nothing more invites Humours to a Part, for it throws the Fibres into Spasms and Contractions, which, if they be in a Part necessary for Life, are very sensible, and occasion Hurries in the Blood : By the Salts lodg'd any where in the Lungs, the Fibres are prick'd, and even sometimes corroded ; these are repeatedly contracted, the Blood is then hurried thither in greater Quantity than can be dispens'd with by the Part ; which, for want of a proper Reconveyance, is retain'd there, and inflames the

Lungs, and produces all our Difficulties in Breathing; for when they are stark with Blood, they can't play; and moreover, wide Steps are taken to an Imposthume, an Ulcer, or an original Consumption, which, if considerable, is always fatal. This is also the Case in bilious Colicks after Fevers, where the Patients are hot with Pain, and thirsty, as well as restless: This Colick is best distinguish'd by making a Pressure on the Belly, which the Patients can't bear, because the Pressure exasperates the Inflammation: This being thus discover'd, in general it is cured, as has been said, by proper Discharges and Revulsives, and cooling Aperients, before it is too far advanced; after which Time nothing but an Abscess can be expected. As to other Peculiarities, it is hardly possible to assign them; for in general, all Inflammations, whether of the slow or fierce Kind, have some Properties belonging to them *in Quarto Modo*, or inseparably, which are the Fluxion, the Impaction, and the Irritation or Pain; but it is not easy to descend to the Inflammations of each Part, which by reason of their Office, their different Structure and Conformation, are able to some Peculiarities, that are to be

taken into Consideration ; and as these Sheets are not to exceed the Bounds of Moderation , I leave the Readers to consult proper Authorities, or their own Judgments, on the Case. Having briefly touch'd upon Inflammations following Fevers ill cured, I shall descend to some few Particulars of Stimulation observ'd after them. I remember to have met with a *Tenesmus* after this Fever, which however was rather originally an Effect of a Decay of Spirits ; but from this it happen'd, that a small *Pondus* of *Fæces* conquer'd the weakly resisting Sphincter ; and altho' a Glyster, and Fomentations gave immediate Relief, yet nothing but Nourishment and Cordials gave such a Quantity of Spirits and Nutriment, as that this Muscle grew strong, and the *Tenesmus* vanish'd.

MANY, especially Women, have been subject to Fits of Vapours, cold Sweats, Apprehensions, and unaccountable Fears of Death ; every small Disappointment dejected them, Tremblings and Weakness attended them ; and as these were the Consequence of a broken State of Blood, few Spirits remain'd, but those that were left were, or seem'd to be, very moveable ; Weakness could not but attend such

a Fit, because the few Spirits they had were to have been employ'd upon the Heart and Stomach, in order to drive the Juices forward, and to complete Digestion; whereas these Fits expend them in a continued Series of Thoughtfulness, Apprehensions, and other needless Cares and Anxieties; and, perhaps, in convulsive Twitches: I know some deny, that the Spirits do ever move swiftly; but let them be reconcil'd to themselves, by their contradicting themselves elsewhere: Wits are not oblig'd to have good Memories. This Illness is recover'd by Chalybeates; and sometimes Opiates are to be given, where the Spirits are restless or tumultuous; Bitters are also of good use: I have known an Infusion of Bark and Steel in Wine, effectual against the Hysterick Symptoms of Giddiness, Pain in the Forehead, Coldness of the Head, and Tremblings.

There are many Reasons why the Pulse shou'd be frequent after a Fever is gone off, and yet not quick, but I advise Practitioners to be aware of this Matter; the Frequency of the Pulse only requires that we caution the Patient against Passions, and their dangerous Appetites. It is not very natural to suppose, that a Person who has

been scorch'd with a Fever, wou'd deviate into the drinking of strong Liquors, and have a greater Regard to their Spirits, than to their Thirst; but they who think so favourably of Mankind are deceiv'd. I have wonder'd to observe the Frequency of the Pulse continue; when the Celerity was gone, and the Fever had pass'd off by proper E-munctories, there was good Reason to suspect a Hectick wou'd ensue, till I consider'd, that the Fever had been carried off, and that this Frequency and Heat were unattended with bad Symptoms, and I found a bold Demand made for spirituous Liquors: Forbearance is all that is required, unless the Patients continue to be obstinate and beyond advising, for then I don't know what Business the Physician has to do, or how he can be of Use.

I have in two Persons advanc'd in Years remark'd an odd Mixture of Pulses, namely, I have observed in them, labouring under a Fever, a *quick*, and yet a *rare* Pulse; this will not be easy to be conceiv'd by such as have not consider'd the different Modes of Pulsations; but it is not hard to explain, for a Pulse may not beat often, and yet, when it does, may give a smart and quick Stroak,
that

that is, may jerk the Finger, and recede suddenly from it, which is the Case of the mention'd Pulsations: But it is not quite so easy to account so for these Pulses, as to found any Indications upon; Practice best convinces us what is the Reason, where it cannot be disown'd, that we are on such Emergencies oblig'd to proceed in the *tentative Method*, supported however by some *Analogy*: We know, for Example, that rare Pulses are converted into frequent ones, by giving the Patients volatile Salts and Chalybeates, or other ponderous Drugs, in great Plenty; and we know that a quick Pulse is made slow, by relaxing and diluting Remedies; from whence it seems a legitimate Inference, to say, that Celerity proceeds from a Stimulus within the Vessels, and an exalted Elasticity of the said Vessels; and that *Rarity* is occasion'd by the want of a Stimulus, and a flexile Disposition of the Fibres of the Vessels: Now as a rare Pulse infers at last a slow one, they are only different Modes; but as a quick and slow Pulse are not compossible, but a quick and rare one are, the Remedies are opposite; we must then blend volatile Medicines with diluting ones, because the Volatiles hasten

the slowness, and the Diluters relax this Elasticity; so that the Pulse will return to its natural State. I find, by daily Experience, that these Pulses are not at all understood by common Practitioners; and as there is an absolute Necessity for an accurate Knowledge in them, I shall illustrate them by a very short and familiar Example; where, if you substitute the Word *Pulse* for *Visit*, the whole Mystery will be readily unravell'd: Thus Persons may very *rarely*, or seldom make a Visit, and yet retire *quickly*, or make a short Stay; and again, they may make *frequent* Visits, and be *slow* in retiring, or stay long; or they may make *frequent* Visits, and retire *quickly*: But it is not compossible to retire slowly and quickly at once, or to make Visits frequently and seldom at once. Now *frequent* Pulses can hardly be such, unless there be a *quick* Retreat; were it suppos'd to be otherwise, it would be a Supposition merely Chymical, because the Notion of Frequency would fall, if the Pulse made any Demurr upon the Finger, and the *Dia-stole* would not bear any Proportion to the *Sy-stole*: For such as call a low Pulse, a slow one, and yet put their Hooks into the Harvest, *Cælum ipsum petent stultitiâ*, and
ubi

ubi prava stultitia, hic summa est insania :

This is an Ignorance that merits not Pity, but Justice ; 'tis an Oversight in the Magistracy of Physick, that these shou'd be suffer'd to make such an irregular Harvest, and commit such accumulative Homicides among the King's Subjects ! Melons and Cucumbers are not near so baneful to the Health of Mankind, as are these Reptiles, who have neither the least Notion of the Theory or Practice of Physick.

PERHAPS we may find Reason to lay some Blame on the Air for the frequent Relapses ; the Air is so far insolubrious as it deviates from any of its usual Seasons : If, for Example, the Summer shou'd chance to be immoderately hot, or wet and moist, the former renders the Blood too salt and thick, as the latter causes a Retention of the *Per-spirable*, and fills the Vessels with too many Salts and a Load of Matter, and the Pores or extreme Parts being unhing'd for their usual Separation of the insensible Discharge ; and as these Excesses of the Season are yet continu'd, the same Disorders do yet subsist ; but altho' it proves true, that this State of the Air affords sufficient Grounds for weaker Constitutions to fall into Fevers from *Contagion*, yet once a Disorder

order has begun from the Fault of the Air in some few ; the greatest Cause of the Continuance is *Infection* ; where any one labours under a Fever, all their Acquaintance as well as Relations make frequent and long Visits, at all Seasons of the Disease, and how many are exposed to Danger from this one Article, to what they are from the Insalubrity of the Air, I think it needless to mention ; because all do in general guard from the Inconveniencies and Inclemencies of the Seasons, whereas People are forward to shew Respect to their Kindred or strict Acquaintances, and throw themselves indiscreetly as well as indiscriminately into immediate Hazard, from the morbid Steams they suck in plentifully from the Diseased : I think therefore the common Method of acting rationally enough in the Plague and Small-Pox, ought also to obtain in Fevers, and then we should find fewer sicken of this Distemper. It is very remarkable that a frosty Season quells Fevers ; that is, a dry and cold Season locks up the contagious Parts, which are melted and diffus'd in a wet one.

I have been much amaz'd to find how little Regard has been had to the Pulse after

ter a Fever ; but when we find Mistakes on this Point to prove of fatal Consequence, one wou'd think it of Moment to be inform'd about it ; if we neglect this Matter, we may pronounce the Patients plac'd in a State of Recovery or Health, when they are actually dying ; and as I have known this to have been the Case oftner than I cou'd wish, even where I have been unkindly treated, it deserves a Remark : What a Figure must a Physician make in a Family, after saying and declaring that his Patients are past all Danger, and that in a few Days time he shall have the Pleasure to hear they are abroad ; when he hears they are abroad, and have travelled to their Grave ? The loco-motive Faculty, the false Appetite, and the cool Habit do often deceive us, but it must be an odd and strange Indolence of any Attendant not to examine the Pulse ; if that does not coincide with the former Symptoms, we have Reason to suspect some Snake in the Grass ; a small and quick Pulse, with a gentle Degree of Heat, accompany'd with a Thirstiness, do either argue the Fever has not quite left the Patient, or that there will be a Relapse. Indeed, where a Physician attending has had

no

no bad Symptoms appear for some Days past, his Modesty will prompt him to bid adieu to his Patient, and wait their Orders upon the first Emergency; but not to see Danger, when it is at Hand, is a strange Blindness. I have never seen these quick Pulses, after great Part of the Fever was carried off, but they were either follow'd by Hecticks or Returns; either are dangerous; for Hecticks shew some inflammatory Disposition of the Blood, and is not remedied without Bleeding, and the mineral chalybeated Waters or Milk: And *Returns* can't fail of being dangerous, because the Fever returns, when the Spirits are exhausted; but much the worse Case is a *Catachrestical Crisis*, and here it is very many are deceiv'd; where many Efforts have been made to unload the Vessels by Sweats, Stools, and such like, of the morbid Matter; where the Fever seems so diminish'd, as hardly to appear; and yet so fix'd, as to leave the Patient very weak: In this Case they seem in an indifferent State, and this Condition is mistaken for Weakness. Here all we can do is to persist in the Use of such Specificks, as are proper for the kind

kind of Fever, and to nourish strenuously, to make a Prognostick, and save Credit.

Opiates in Fevers are never requir'd from the Fever it self; some Symptom must arise that indicates them, namely, great Pain, excessive organical Discharges and Restlessness, or some Hurry in the Spirits; thus, in a dry Asthma, where there is no Cough, no Spitting, and yet there is an *Orthopnæa* or such a Difficulty of Respiration, that they cannot breath, but whilst they sit upright, *Opiates* are indicated after proper Discharges made, blended with volatile Spirits, to restore the Expence of Spirits spent upon the Muscles of the Breast, during such a struggle, and to hinder their further Excursions, by lessening the Sense of Irritation: All organical Discharges arise from Irritations of the Glands, and they being thus provok'd spue out their Contents, for which Irritation, *Opiates* are specifick, and in Truth, Convulsions are produc'd no otherwise than common Diarrhœas: For as in the latter, some acrimonious Parts lodg'd in the Intestines, do fret and contract the Glands, and they do hereby throw out a large Quantity of Matter from the Blood; in like manner, some irritating Matter

Matter lodg'd any where in the Nerves irritates them strongly, and their Vibration invites a more copious Secretion of animal Spirits thro' the cortical Part, and an irregular Influx of them into some particular Nerve, and so raises a Convulsion; and therefore Opiates are equally, and for the same Reason requir'd in both these Cases; that is, to allay the Sense of the Part, by relaxing the Nerves, and so to prevent the Consequences of Irritation.

A certain Person, who was near Sixty Years of Age, and has travell'd from Fever to Fever for some Months, was cured by me of a Fever about a Year ago; but since that Time till this, namely, till *Friday May* the 24th, 1728, I have not heard of him, he having committed himself to the Management of an Apothecary. On *Monday* the 20th of *May*, being in a Fever, he was seiz'd with a violent Hæmorrhage, and in his Legs, Breast and Neck especially, Spots broke out of a Violet Colour, of the Diameter of two Lines of an Inch in Circumference; his Pulse, when I saw him first, was exceedingly weak, from the excessive Loss of Blood; on *Friday*, which was the first Time I saw him, his Blood still issued from

from his Nostrils very plentifully, and dropt out in Bubbles; it smelt most offensively, infomuch that his Attendants could not bear its Stench: In order to curb the Flux, I gave him internally Acid Spirits, Glutinous Medicines, Stypticks, and cool Cordials; externally I advis'd *Turundæ* to be thrust up his Nostrils, sprinkled with astringent Powders wetted with astringent Tincture of Steel.

BUT finding little or no Success attending these Remedies, I order'd him to blow out the Cake from his Nostrils, and caused them to blow up a Powder compos'd of Colcothar and common green Vitriol; upon which he complain'd, as is usual when this Caustick Mixture is made use of, violently of Pain, and bled afresh for a while; but presently after the great Bleeding stopt at the Nostrils, save that a little Quantity ouz'd from the Nose and Mouth till next Day; and then gave him astringent Remedies.

THE Bleeding from his Nose ceas'd very much, but his Jaws began to issue forth; the Blood from thence also smell'd very foetid; and thus, for seven Days after my coming to him, the Blood broke out in several

veral Places in small Quantities. The Continuance of the Stypticks externally, and of the Remedies internally, quell'd the Bleeding so much, that we had Leisure to have Regard to the Fever; wherefore I order'd him a Bolus of *Sang. Dracon. Terr. Japon. Croc. Mart. ast. Sal. Vol. C. C. & Conf. Rosar. Vitriolatar.* every four Hours, and six Spoonfuls of a Julap, with *Aq. Lact. Alex. Cinn. Fort. Sal. C. C. v. Sp. Vitriol. Sal. Absinth. Syr. Limon. & Marg. p.p.* of which he also took six Spoonfuls in his Faintings, which were now frequent: The next Day his Urine, which hitherto was citrin, subsided well, and continued citrin and subsiding the Day following; so that on *Friday* I gave him an Infusion of Rhubarb, which mov'd him twice or thrice gently; after which, his Bleeding stopt entirely, his Fever went off; only as a Sharpness of Blood still remain'd, he was hectic, for which I order'd him the following Remedies, being afraid to order him a Milk Diet, because he was Asthmatical, and subject to a spitting Cough, heaving up much Phlegm from the Bronchiæ; *Sc. Pulv. Testac. cum Decoct. Rad. Chin. Sars. Rasur. C. C.* edulcorated with *Rad. Eryng. Condit.*

I had

I had forgot to observe, that I was assur'd there were fair Remissions of the Fever, and was put in mind of the Bark by the Apothecary, which I consented to, till I was convinced by a small Trial of its Inefficacy, either for the Fever or the excessive Hæmorrhage.

THIS History shews us, that *Baglivi* was mistaken, when he affirm'd, that a petechial Fever was never seen to end well, if a great Hæmorrhage accompany'd it, and if great Symptoms attended; for besides the Bleeding, the Patient swoon'd very often, and was very restless.

As every Physician is oblig'd to act according to Reason, he owes so much Justice to the Publick and his own Reputation, as to communicate his Grounds of acting.

I take this Case to contain a Number of Particulars, very rare and uncommon; and, indeed, it may be call'd a *particular Plague*; forasmuch as the Patient himself could have been no more fatally engaged in an *Epidemical Pestis* with the like Symptoms, than he now was.

HIS Blood, which the Apothecary took from him before my coming, was extremely fizy; and we all know with how many vo-

K

latile

latile Salts such Blood abounds ; the *Coagulum* at Top is a Congeries of soapy Particles, that is, it wants the watry Part of the Serum, which is evaporated, and the Oils are, by frequent Circulations and Occursions with the volatile Salts, united into a *Coagulum*, as it happens with the Mixture of rectify'd Spirits of Wine and Spirit of Salt Armoniack, or as it happens to Salt of Tartar and Oil of Turpentine, or lastly, as it happens to Oils and Salts of Fern, or any other fix'd Salts boil'd in Water to the Consistence of Soap ; and as this Mixture of rectify'd Spirit of Wine and Spirit of Salt Armoniack turn'd into a Jelly, is, by a moderate Heat, melted again, so is this Rheumatick Blood remelted and turn'd Liquid by a gentle Fever in the Blood, and becomes so dissolv'd, that the Globules and Serum are confus'd and thinn'd to such a Degree, that it swells the Mass and distends the Vessels, and escapes thro' the narrowest Crannies ; nor am I certain whether this Sort of Blood can ever be recongeal'd, as I am sure it can be dissolv'd ; at least I am well assur'd, in such like Cases, there is no recongealing some Fluids, which have in like Manner been dissolv'd : If this be true, then if the whole

whole Mass were corrupted, we could not recover such Persons; and, as Experience teaches us, the Discharge of such Blood is absolutely requir'd, for the old Adage, *tollit quod putridum, non alterari postulat*, is a settled Truth: Now if the whole were to be discharg'd, Death must ensue; wherefore Recoveries in such a State are to be call'd wonderful, and well manag'd, if the greatest Part be corrupted only.

BE this reasoning how it may, the Blood was so dispos'd as to run out at various Passages; and sure we are an impetuous Motion upward, a Thinness of Blood, and a small Resistance at the Orifice, are sufficient Causes to produce this Accident. The Intentions of Cure in these Circumstances were then to be level'd at curbing and diverting this irregular Bent, at thickning the Juices, and so clogging the Motion, and at soldering the Breach by proper Topicks: As to Diversion of the Fluxion by drawing off Blood, we could not allow of it at all, because the Loss of Spirits and Strength from the vast Quantity of Blood that had been spilt, could allow of no farther Expence; we therefore had no other Expedient left, than to administer Acids, Stypticks and glutinous

tinuous Remedies, which might agglutinate and incrassate the Juices, and close up the Vessels; to explain how these Effects are produced, we need only take a View of the Bulk, Figures, and other mechanical Affections of these Remedies, which I will do as briefly as I can, or the Shortness of these Sheets will allow of.

FIRST, as for *Acids*, they are specifically *heavier* than Blood; their *Figure* is, as far as Glasses and their stimulating Quality inform us, somewhat *Conical*, or they are minute *Cylinders*, and they are hard; whereas the Blood contains both Oils and volatile Salts in it; the Oils are soft, easily penetrated into, and the Salts are elastick: These Salts by their Figure penetrate into the Oils, attract the oily Particles, and cause Cohesion, or what we call Coagulation; from whence they thicken the Juices, and render them less apt to escape through the small Orifices; and moreover, they attract the volatile Salts, and join in with them, and prevent future Commotions in the Mass of Blood.

SECONDLY, as for *Stypticks*, they by their Weight and Figure move forward indeed, but slowly; soasmuch as the aculeated Figure of the earthy Parts, join'd in with

THOMAS

I

Acids,

Ac
tion
war
afte
ear
pan
Gu
Con
Juic
whi
one
Blo
to t
leas
L
they
the
hur
the
Mat
and
cling
Tr
appli
quir
great
strong
stick

Acids, arrest the Juices in their rapid Motion, and help to carry the Humours downwards, as appears by the Urine subsiding soon after their Administration; and moreover, earthy Parts have the same Effect in our expanded Blood, as they have in Retorts upon Gummosse Bodies; namely, they hinder their Contacts, and diminish the Swelling of the Juices: They stimulate in a small Degree, which causes a Corrugation of the Vessel; and one thing may be observ'd, *viz.* that the Blood carries all Medicines the more readily to the Part that is open, because there is the least Resistance to Motion.

LASTLY, As for *glutinous Medicines*, they are light and cohesive; wherefore in the Circulation they are not likely to be hurried much forward, be the Velocity of the Blood of what Degree soever, since their Matter bears no Proportion to their Bulk, and their cohesive Property causes 'em to cling and stop every where.

THESE Remedies then were given and applied, because they were eminently requir'd, and by their Continuance in a greater Quantity, and by giving them stronger and stronger, and lastly by a Caustick Powder to sear up the Orifice, the

Bleeding was rather much curb'd than entirely stop'd till *Friday*; but as this ouzing did not threaten immediate Hazard, and the Fever, which had been quite neglected hitherto, demanded our Care; we were oblig'd to be watchful how we proceeded in this ticklish Affair; for if we gave heating Remedies, which the Pulse requir'd by reason of its Weakness, and the Fever wanted in order to further a Concoction, and to expel the morbidick Matter that remain'd yet within; then we run the Risque of causing a Return of the Hæmorrhage, which was not at all to be wish'd for, since the Patient was already so greatly weaken'd; and if we did not regard the Fever by proper Helps, fatal Symptoms wou'd have attack'd him, and thus he wou'd either have split upon the dangerous Rocks of *Deliriums* and Convulsions, or of Deliquiums, and continual Weakness, and Death wou'd have either way taken him off; wherefore I prescrib'd him the following Bolus to be taken every fourth Hour, *Sc. of Sang. Dracon. Terra Japonica, conserv. Rosar. cum Sp. Vitriol. acidulat. and the Julap compos'd of Aq. Lact. alex. Pæon. C. Sal. Absinth. Sal. Vol. C.C. Sp. Vitriol. & Syr. Limon.*

Limon. by which his Spirits were reliev'd, and yet the Bleeding did not return; but the Water subsided regularly, and then I gave him a purging Potion of Rhubarb. upon which he was freed of his Symptoms, and nothing remain'd, save a hectical Heat; which to allay, I order'd him a Decoction of China, Hartshorn, Eryngo Roots candied, thrice a Day; an Electuary of Crabs-Eyes, Gums Arabick and Tragacanth, and Conserve of Mallow Flowers, Morning and Evening, and to drink above it a Draught of German Spaw-water.

THE Reasons I had for this Procedure were; because in all Fevers we are to look how far we can procure a *Crisis*, or a regular Expulsion of the morbid Matter; we are never to attempt this Expulsion, till Nature gives us Intimation of it in the Urine by dropping a Sediment, and this Sediment is to be procur'd by Art, if Nature fails in it: Now it was impossible that this Concoction shou'd ever have happen'd in the Case before us, if we consider how much Blood was lost, and consequently how few Spirits were left to begin, much less to complete such a Work, and therefore it was necessary to relieve them, to in-

vigorate the Fibres, and give new Vigour for the Accomplishment of such a Work by volatile Salts; and soon after their Administration, the desir'd Effect ensu'd, without the much fear'd Return of the Bleeding, which might have happen'd, if we had not blended along with these Volatiles, the Acids and Stypticks. As soon as I perceiv'd a true and regular Sediment, it was necessary to catch Time by the Forelock, and to order a gentle Cathartick, to exterminate the Remainder of putrid Matter, which being done, Success attended our Endeavours.

I have forbore to make mention of one Method I made use of to stop the Blood, which is too rarely practis'd; namely, I caus'd Compresses to be apply'd on each carotid Artery, and by Ligatures upon them, they were so straitned, as to curb the Flux in a small Space of Time; the Ligatures were so order'd, as that that on the Right Side was tied under the Left Arm-pit, and that on the Left under the Right; the diseas'd complain'd a little of the Uneasiness, but bore it with Patience: This is a Revulsion rarely us'd, but whoever neglects it upon such an Occasion, must not be sufficiently

ficiently appriz'd of the true Method of Cures.

Rashes in Fevers are not always critical, nor ought we to be solicitous in keeping them out, as is commonly practis'd: This Mistake often proves fatal, because as it obtains among many, that it is dangerous for a Rash to retreat, the Practitioners are too forward in giving all heating Remedies to accomplish their Ends; thus are volatile Salts, Castor, Spirits of Lavender, and warm Bolus's, administer'd with a Design of keeping up the Spirits, and driving this supposed Enemy to the Extremities, whilst the Remedies prove the Disease itself. Some accidental Hurry, not at all depuratory, rais'd in a certain State of Blood, produces them, and they ought not to be regarded at all; for the Fever being our Point in View, we are to have Regard only to it, by making such Discharges as the Nature of the Fever will bear; if we act otherwise, we hasten Deliriums, and other fatal Symptoms: A Rash is not unusual upon a Fever, caught by Cold, and eating too cooling Fruit. If the Pulse be strong, if Symptomatical Sweats flow, the Tongue be white and inflam'd, and the Patients be scorch'd with

with Heat, and yet the Urine is not concocted, to what ill Purposes do we not give Expellers to keep up the Fever already too high and inflammatory? This Method produces the ill Effects we fear from the Rash's Retreat; and besides, it makes the Rash itself retire, in lieu of which our Patients are thrown into Ravings, Convulsions, Diarrhoea's, Dysenteries; the Tongue grows black and cracks, and Affairs, which by a moderate Regimen would have taken a favourable Turn, grow worse, and Death ensues: How unskilfully have we heard many relate their Patients Misfortune? That notwithstanding all their Care and Art, their Patient slipt thro' their Fingers; that nothing could keep out the Rash, that it disappear'd and ruin'd their Friend: Never suspecting all the while, that they rode Post out of the Road. Rashes are not so dismal a *Phænomenon* as they would endeavour to persuade us; for before the *Crisis*, or Concoction, you have nothing to do, only to give a strict Eye to the Nature of the Fever; if it be too high before Concoction, take Blood away, as if there were no Rash, and keep your Patient to a cool *Regimen*; but if it be a slow Fever without Malignity,

ty, which will be known from the Strength of the Pulse, and by a Freedom from any bad Symptoms, then are we to administer warming and digestive Powders, Drops, or Bolus's, till the Water becomes concocted; or lastly, if the Fever be malignant with a feeble and low Pulse, and be attended with slow Deliriums, Convulsions, and other dismal Accidents, we are in general to enliven the Circulation with volatile Spirits, to apply Blisters, and administer all that is cordial and invigorating, or the Blood will not only stagnate, but the Rash will mortify. Where the Rash breaks forth symptomatically, and we have acted with Judgment, the Water will begin to be concocted; and altho' the Rash should continue, yet gentle Catharticks will then agree, and carry off both the Rash and Fever: This Method I have follow'd with Success, and have had some late Examples to confirm the Practice. If we consider the Matter seriously, the Nature of this eruptive Fever is such, as to admit of Eruptions, as common Fevers do of Sweats; and as these are justly divided into a Symptom and a Remedy, so are Rashes before Concoction a Symptom, and do prove that there is a great Commotion in
in

in the Fluids ; whereas, if they appear after Concoction, or after a stable and laudable Sediment in the Urine, they alleviate ; and prove that the offending Matter, which resided before in the Blood, is now translated from thence into the Extremities, and a Calm ensues ; we are then to consider whether the whole Matter be moved from within to the Skin, or whether Part only is expell'd : This we may readily discover from the Degree of Relief ; for if some Fever do yet remain, it is certain some Relicks are detain'd in the Vessels, which require Care and Skill to exterminate : In either Case, Lenients have this good Effect, that they do, without weakning Nature precipitate the morbidick Matter out of the Blood, as I have found to the great Good of my Patients, and of my own Reputation. Be cautious then how you inflame, imbibing imaginary Notions of deleterious Matter being the Cause of these Rashes : It is preposterous to judge of the Fever by the Rash ; we must on the other hand know the Nature of the Rash from the Fever ; this being prior in the Order of Production, governs our Method of Cure, and that, being a Dependent on the Species of State then

then reigning, requires proper Remedies also for itself; which Methods don't at all contravene, and so may jointly be made use of. By what has preceded, I hope no one will ever conclude it necessary, or ever expedient, to attempt to cure a Rash at all Events by Bleeding, as is the Custom of some, deeming all of them Inflammations and symptomatical Eruptions, enforcing their Practice by particular Successes; for it would be much the same sort of Reasoning as the following, to wit, very few there are who have not cured Diarrhœa's in some Particulars by giving Astringents; would it therefore be just to conclude, that a critical Flux in the Fever should be treated in this manner? Or let us suppose them Inflammations, can we be so lavish of Blood, where the Strength is decay'd, and for want of Spirits, the Pustules are in the next Condition of turning into a Gangrene; and in Effect, I have seen the ill Consequences of such a Practice in the last Case mention'd, which ought to make us cautious: There are other forbidding Circumstances, which, as they don't immediately call up my Attention, I shall omit; having no other Views at present, than to relate Facts which have
fallen

fallen in my Way. The great *Sydenham* has given Rise to many Errors of this Kind, which however are not his, but his Followers Faults: He calls Inflammations of any Sort *Intercurrent Fevers*, and treats them as bare Inflammations; but let such as follow his Opinion recollect, that he nowhere encourages Bleeding in *malignant Pleurifies*, but on the contrary disapproves of it, saying, that they won't bear it so often as others do; and elsewhere he inculcates very judiciously, that symptomatical Pleurifies, or other symptomatical Inflammations, will not bear so much Bleeding as essential ones; from whence it may fairly be deduced, that by such Fevers he only means essential Inflammations, in which there is, doubtless, a great Latitude allowable, and even necessary, in Bleeding: But where it is evident that the Rash is Secondary to the Fever, it must be allow'd, so to depend on it, as to be remedied by the Methods proper for its Cause; because, otherwise, we might take off the Rash, and the Patient also.

WE sometimes meet with *Quinzies* of a very malignant Nature, and which it is to be fear'd too often prove such by Misinformation;

formation ; for as any *Lentor* in the Blood is capable of producing Tumors, so, as in other Kinds of them, happens it here, that the Blood rests in the smallest Twigs of the Arteries, and the Parts become turgid ; and more particularly here, because there are so many thin and small Muscles concern'd in the Motion of the Bronchiæ, that the Circulation may very readily stop here ; moreover in Men the strait Ligatures they make use of daily on this Part, and in Women the exposing this Part of the Body to the Cold, are two Extremes which equally contribute to lay such an Embargo on the Circulation ; when therefore Fevers happen to Persons under a State of Blood that is apt to stick every where, and more particularly if it be at the same Time loaden with caustick Particles, it can hardly fail of producing dismal Effects. If Trials and Experiments have any Force of proving on the Blood, what we don't deny they do on other Bodies, we cannot help saying, that we have irrefragable Arguments to prove, that there are Salts of various Kinds in our Mass of Humors : For what plainer Proof can be brought, that we have Acids in some of our secreted Humors,

mors, than that they become Vitriolick by administering, or being blended with, ter-
reous Medicines, or that there is an alkaline
Salt in the *Serum*, when it will turn Syrup
of Violets into a fine green Colour in an
Instant ; and that this Salt is of the volatile
Kind, when the same Serum precipitates
sublimate Mercury out of Water into a fine
white Powder ? But we are of late, by our
refin'd Mechanists, persuaded to lay aside
our Senses, and deny Facts, as being of no
Use to Practitioners : We may partly know
of what great Prejudice this Cant is to the
Practice of Physick, when we see such Men
seldom succeed in Business : For either is
lame without the other, Chymistry and Me-
chanicks must go Hand in Hand : To deny
this, is going further than the great Dr.
Sydenham did, who accounts for *Malignity*
in the following Manner ; ‘ Now, says he, if
‘ any one asks me, how it comes to pass,
‘ that as malignity consists in most hot and
‘ spirituous Particles, there shou’d so sel-
‘ dom appear any Signs of a Fever, even
‘ in the most Malignant Diseases ; I wou’d
‘ give this Answer, first in the greatest In-
‘ stance of Malignity, it is very plain, that
‘ the morbidick Particles are so subtle, acu-
‘ leated

‘ leated, when it first begins, that they pass
‘ thro’ the Blood like Lightening, and, as
‘ if the Spirits were thunderstruck, they
‘ don’t raise the least Commotion, so that
‘ the Sick dies without a Fever: But in a
‘ less Degree of Malignity, which is com-
‘ mon to other Epidemics, the febrile
‘ Symptoms are so little to be perceiv’d
‘ from a Confusion in the Humors rais’d
‘ by incongruous Particles contain’d in the
‘ Mass, that regular Symptoms can’t be
‘ expected, because the whole OEconomy
‘ is subverted, and the Fever is depress’d.’

—Thus that ingenious Gentleman who
decry’d all Theory, but his own: To re-
turn from whence I digress’d, these Inflam-
mations are of so malignant a Nature, that
the common Discharges of Blood can’t be
suffer’d, the Matter impacted for want of
a due Spring in the Fibres, and by Reason
of its congealing Acrimony, stands still, and
never retires, but turns either to Putrefac-
tion or a Gangrene; nor is it done in the
ordinary Manner, where the Blood stops,
because the Parts are too full; but the
Blood thrown in, fixes and preys upon the
Fibres, and acts as it does in a Carcass, by
turning more acrimonious, and huffing up

L

the

the Parts, and turning into a cadaverous Putridity : Then it is the Parts feel pappy, begin to smell rank and earthy, they puff up, look lurid, or of a deep Violet Colour, and lose all Sense of Pain ; the Pulse becomes formicant, or small, weak and frequent ; a slow Fever attends, and their Spirits being exhausted, they go off a little delirious. This is an exact Description, as Observation has inform'd me ; Patients are not too nice in observing whether a Fever did not precede, which I am apt to suspect ; because in the whole Course a Fever subsists, and moreover *Deliria* succeeding, make it still more to be presum'd, that this fatal Symptom depends on a Fever ; and such Inflammations are very rare with us, where the Blood, I mean, is only acrimonious ; but such Gangrenes frequently happen from a strong Inflammation not timely look'd to : Because where the Blood is copiously driven into a Part, so as to distend the Fibres far beyond their ordinary Tone, and then to stagnate, is no great Surprize ; but it is not at all usual for caustick Particles to be deposited upon a Part, and ravage it, as if it was designedly prescrib'd. This latter then I suspect to be a

I

Symp-

Symptom of a malignant Fever, and we are to have a particular Regard to that, making such Discharges as the Inflammation requires, and the Fever admits of: And Blisters ought to be encourag'd for the sake of the Fever and Revulsion also: Besides Cordials for the Spirits, we are to attempt to carry the morbidick Matter thro' some distant Channel, if the Water subsides, and the Strength allows of it: And this ought to be done by such Catharticks, as will move without heating the Blood. If we fear there will be any Danger of its retreating into the Blood again, and of its siezing on some more noble Part, or if it has actually retreated, we must be sure to make proper Discharges, whether by Bleeding, Physick, or Blisters to recal it to the Extremities, and these must be done with all possible Expedition; for I have seen the Fate of the Patient determin'd in less than two Hours upon such a Retreat, where being call'd in too late, there was no Room left for any Prescription, the Patient being in her Agony, who a little before was not so much as suspected to be in the least Danger. If there be Matter lodg'd, and we have attempted other Means to break

the Impostume, a gentle Emetick will effect it, if it can safely be done: Besides these Means, we ought to anoint the Part affected with Liniments, made up of Emollients and Discutients, so temper'd, as to aim more at Discussion or Suppuration as the Case requires; wherefore Sperma Ceti melted, Oil of Almonds and Wax may be made into a Liniment, with an Addition of Spirit of Wine camphorated, and Spirit of Hartshorn; and if we find no Success in this, we ought to make Use of Fomentations, which by their actual and potential Warmth, will move the Humors deposited, and remand them into the Circulation; such as the following is, to wit, we may boil Mallow-Leaves, Roots of Lilies, and the Tops of the lesser Centory in Milk and Water; and when we bathe with Stuphs, we add some rectified Spirit of Wine every Time we foment; or apply Cataplasms to try to suppurate, if we see no Hopes of its being capable of being discuss'd, namely, made up of Figs, Lily-Roots, and Mallow-Leaves boil'd up; or we may make use of both together. If all these Efforts don't succeed, the Patient is justly deem'd to be past Recovery: For they who can't

bear Discharges, can't bear Pain ; and therefore Causticks apply'd in order to ripen and bring out the Matter lodg'd, do but exasperate, without promising any Relief. If Bleeding take Place, it ought last of all to be perform'd in the adjacent Places, namely, the Tongue : Because particular Discharges ought to succeed general ones ; and because if it was done in the Beginning, the Bent of the whole Mass wou'd turn into that Channel ; as we see it happens in a want of the *Menstrua*, where we never bleed first in the Foot, because the Blood runs with greatest Ease to the Part unloaden, and crouding into the Vessels already obstructed in its Passage downwards, they lose their restitutive Force thereby, and the Obstruction becomes more rivetted ; whereas, if we abate the Quantity at a distant Part first, and administer Aperients for some Time, then we put a Force upon the Vessels of the *Uterus* by bleeding in the Foot : Because this Force, which cou'd not fail of being prejudicial before, where the Part was not fitted to receive its Impression and Impulse, by Reason of an Adhæsiion of viscid Humors to the Walls of the Vessels, without Danger of a

Rixis, or Rupture of them, is now of Use; because a Moment added, when the Humor is prepar'd to yield, and the Vessels are render'd duly flexible, opens an Obstruction at a proper Time; and I think it is plain that the Blood's Force is encreas'd towards any Part, where a proper Quantity is drawn off; that is, its Velocity encreases in Proportion to the Impediment taken off: In like Manner, if Bleeding be allowable, it ought to be done in the neighbouring Parts last, because it then acts as an Aperient.

Tremblings succeeding Fevers, are more or less dangerous, as they are more or less universal, or as they are accompanied with the Fever: But in this Case, we may be liable to a Mistake; for the constant, I speak of perpetual and universal Tremors, but alternate Motion of the Muscles over the whole Body does so agitate the Juices, the Fibres contain in them, that it is no Wonder there shou'd be a Heat, and even Sweats of Labour, as well as a high colour'd Urine; but if the Patients Tongues are dry and parch'd, it is reasonably suspected that a Fever of some Kind lurks, and then this Symptom is a Translation of the morbidick Matter

Matter on the Nerves : And Tremors without any Fever, are in Truth no other than a Translation, with this Difference, that in the latter you have only the Translation to remedy by Discharges and Alteratives, whereas in the former, due Regard is to be had to its original Cause, when we are often disturb'd in our Method by Indications thwarting each other. Were no other Consideration to prevail than the bare Symptom, we ought to draw off the Matter from the Head with Blisters, Setons, Causticks, Catharticks, and indeed, by Discharges of all Kinds, which prove often unsuccessful, as I have seen many Instances that were Reproaches to Physick, and all its Extent ; we ought to administer *volatile oily Salts*, *Castor*, *Assa fœtida*, *Gum ammoniack*, *Pulv. ad Guttet.* and others of this Kind, in order to correct the Acid in our Juices, and to supply the Expences of the *Liquidum Nervorum*, occasion'd by the continual Excursions of them into the Nerves and Muscles, and lastly, Opiates must be blended along with the Alteratives, which are necessary to allay the irritating Particles lodg'd on the Nerves, and thereby to prevent these *Tremors* : When they are a soli-

tary Symptom, they are tedious and lasting; and by a like Reason, they must be very dangerous, if they are attended with a Fever; for there is scarce Time enough left to accomplish so exorbitant a Symptom, nor are there much Grounds to make Discharges, which are generally highly necessary: The *Chorea Sancti Viti*, or *Vitus's Dance*, is but a Kind of Trembling, where the Feet, Hands, and all the Parts are alternately mov'd, and constantly; and which I saw lately come on at the latter End of a Fever, where in other Fevers *Deliria* us'd to succeed, and which prov'd fatal; for I question, if a free Liberty had been given to apply Blisters, (as they were strenuously refus'd, and two only were by a Sort of Force apply'd to the Arms) whether it cou'd have been possible to have revuls'd so rivetted and confirm'd a Cause, settled by two or three Relapses: The Blood by so many Fevers grows sharp and caustick, and Irritations must ensue of Course, which can't be allay'd without Opiates, which in the present Case can hardly be dispens'd with, because the Spirits are depress'd with them, and, losing their Agility, their very Intercourse with all the
Parts

Parts is cut off; for it is difficult to hit upon a middle Way, between too much Motion and none at all in these Cases: The Spirits are few, but nimble and active; if we give Remedies to curb their Agility, we by such Means depress the few remaining, and then all Action is lost. Dr. *Willis*, in Convulsions, cries up a Sort of an *Elixir* of *Vitriol*, and other Authors have done the same; others praise extremely astringent Remedies, in these Cases, among which are *Mistletoe*, and *Alchymilla*; among others *Waldschmidt* puts the Question thus; *Quere*, In what does the specifick Virtue of some Remedies in Convulsions consist? He answers, In their Astringency, which Vegetables enjoy, v.g. Rue, Betony, Marjoram, Lily of the Valley; from whence the Pores being dilated, they are reduc'd to their former and due Figure, and the rushing in of heterogeneous Particles are hinder'd. I take it for granted, that Astringents are found by Experience useful in Conyulsions, upon which *Postulatum*, it is reasonable to examine why Stypticks are blended along with others which abound with volatile Parts; there is a certain *Tension* of our Nerves, which upon the least
Acrid-

Acrimony that falls into them, causes them to vibrate exceedingly ; were they lax, this cou'd not happen, for that Condition of them makes us liable to Palsies ; and were they rigid to some Degree, they wou'd not so frequently tremble ; it is therefore a certain Degree of Elasticity of the nervous Fibres that makes them move upon any disagreeable Particles lodg'd in their Cavities : Now Astringents have the Power of making our Fibres more rigid, and consequently less liable to these Tremblings : For rigid Fibres are more slowly mov'd, altho' they retain their Impressions longer ; but Fibres grow rigid, by being made more compact, that is, by contracting them, the Fluids in them are fewer, their Fibres approach nearer to each other, and become more solid, and grow specifically heavier ; hence do they require a greater Moment of Fluids to move them. These Tremblings, accompany'd with Fevers, are known by the Drought and Want of Appetite, along with a Quickness of the Pulse and Heat, with a parch'd Tongue, and Pains attend the Convulsions, especially at the Insertions of the Jaw-Bones.

I have

I have once observ'd an odd, and almost unaccountable Pain in the Back, follow the Shiverings of this Fever, which was attended with an obstinate Costiveness, and resembling that in the beginning of the Small-Pox, but much more violent and continual: The Party seiz'd had a quick and strong Pulse, was exceedingly hot, and his Face was as red as Scarlet; the Pain afforded no Respite, till it took off the Patient in a Day after I saw him, nor had he been seiz'd above two Days and a half till it carry'd him off. As I saw him but twice, it is difficult to account for this Symptom, and we could not obtain Leave to open him; so must be contented to offer at a Reason of so unusual an Accident. The Pain was so acute, that it perfectly distracted the poor Man, and made him cry out most vehemently and continually till he died. Neither Bleeding, nor Glysters, nor Physick, nor Opiates, nor Fomentations avail'd the least: He had no Passage downwards; and if he offer'd to stretch himself backwards, he bellow'd with intolerable Pain. I enquir'd whether the Patient had suffer'd any Injury by lifting heavy Loads, which his Trade might subject him to; but
he

he answer'd in the Negative, and assur'd me it was merely brought on by Cold. If we may venture to give Reasons for this Violence of Pain, and for its carrying the Patient so suddenly off; we may know that a Blood render'd gross, and very acrimonious, is fit to introduce very excruciating Pains; and if we add to this, that the Pains of young Persons are more exquisite than of those more advanc'd, because Fluxions are more violent in the former, than the latter; and it is very probable, that the carrying heavy Loads at other Times, might weaken the Loins, and render 'em fitter to receive such morbid Matter: I think then, that these Pains depended on a violent Influx of such thick and aculeated Blood into the Capillaries of the Loins and Colon, and render'd him Costive, as well as made these exquisite Pains; for as the Membranes are extremely sensible, any Fluxion upon them will be less capable of being born, because they yield less to the Influx; and I therefore suspect the Membranes covering the Bones were inflam'd from the vehemence of the Pain that attended, and that the Bowels also partook of the Inflammation, because nothing mov'd

him

him to Stool ; the Pain being therefore so very exquisite, a great Quantity of Blood must have been hurried into these Parts, and a Gangrene must at last have been the Period of this Disease. If any Relief cou'd have been afforded to this young Man then, it must have principally been done by large Bleeding at the very first Onset ; his Youth, the violent Fluxion, his great Motion of the Blood in general, and his Strength wou'd have encourag'd it ; nor can I see any more promising Remedy for such a Disorder ; for doubtless it ought to have been treated, as any other inflammatory Symptom shou'd be, where the Pain points out the Quantity to be drawn off ; after universal Discharges from the Veins, Cupping-Glasses apply'd to the Part affected, and scarified, wou'd have been of great Use to evacuate and unload the Parts adjacent ; after which, Fomentations might have taken Place, and Glisters wou'd then have pass'd, when the inflammatory Disposition of the Bowels had been taken away ; nor can it be any Surprise to Practitioners, if I say, I wou'd have taken Blood away twice or thrice in a Day, if the last Bleeding was found ineffectual ; because in such sudden,
quick

quick and violent Symptoms, we are to Proportion and hasten our necessary Discharges; what Latitude is there not allowable in Apoplexies for such Discharges? Where sixty Ounces are taken off in a very short Time, by which the Patients recover to a Miracle, and after which they don't complain of want of Strength; it is true, that a Symptom can't be so lavishly treated with Discharges, as an original Cause; but it is also true, that in the Relief of Symptoms, we are to draw off as much as will free the Patient from them; and in great Diseases, we must act quickly, and as it were at once; whereas in smaller, we proceed moderately; and where the Patient's Strength wont bear such Discharges as the Symptoms require, we must pronounce a fatal Prognostick, and proceed as Reason directs us in the Discharge of our Duty; after proper Discharges have been made, or rather at the same Time, I should have given him cooling Remedies of Saltpetre in watry Liquors, and have kept him to low Diet, and I am of Opinion he wou'd have escap'd: I chuse to mention this unusual Case, to warn others against the like, and to declare my Sentiments on it; not that
such

such Pains in the Loins do always require such a Method of Cure ; for I have known Women subject to the Whites, much infested and fatigu'd with them ; and if they be violent and continual, they threaten a Palsy, as I have known happen.

SLOW Fevers carry so much more Danger along with them, as they make Patients indolent and unwilling to pursue proper and convenient Measures to recover their Health ; they make slow Advances and Surprize with Terror, when they have fix'd themselves so as to yield with great Difficulty, if at all. The Patients seem to themselves not to have occasion for the Assistance of a Physician, and do therefore rub on in a valetudinary Way, hoping the next Day will make a Recompence for the preceding ; and they being no ways worse the following, than the preceding Day, they are persuaded that Nature will overcome ; and thus have many of late been deceiv'd in their false Hopes, and have gone off insensibly : For I have known this Fever attack some, and these the most timorous and observant of themselves, so clandestinely, as not to be observ'd ; they have been able to transact the common Affairs of Life, only
they

they have complain'd of an Unwieldiness and a Lowness of Spirit, which they have endeavour'd to conquer by Wine, and have been apt to suspect the Liquor for the Morning Heat, and the want of Appetite that succeeded : Thus having gone on for six or seven Days in a Train of Indolence, they have been surpriz'd on the seventh Day, and have died on the eighth Lethargick or Delirious, with promising Pulses. The Shivering at the first Seizure has been judg'd an Effect of the uncertain Weather ; and all that follow'd, the Consequence of Irregularity in Diet and Liquor ; so that in the Eye of their Neighbours, they seem to have died suddenly ; whereas, they in Truth have had seven Days to provide against the fatal eighth ; and if due Care had been taken, their Fever would have lasted above fifteen Days, in which Sense their Death is premature. As it is evident that such Deaths are imputed to Neglect or Indolence, I must desire it may be observ'd, that, wherever a Shivering is succeeded by Lowness of Spirits, moderate Heat, Vomitings, or any other Symptoms, that daily change their Shapes, or continue as they begun ; these are the Effects of a Fever, which the Patients

tients will find, by fatal Experience, are not to be dally'd with; therefore, if you are call'd to such, let them know their Circumstances, and not wonder you should offer to prescribe to so trifling an Illness, where such Neglects have prov'd so fatal: Let them know their Mistake in Emphatical Terms: What has contributed to this their Mismanagement, is the Intermission or Remission of their Fever; had their Symptoms infested them continually, possibly they would have been alarm'd; but as they found Relief, they flatter themselves the Disorder, whatever it be, or how great soever it be, will vanish of its own Accord. Others, wearied out with Relapses, have hop'd their Recovery would as certainly ensue, as it had hitherto, and have deferr'd asking Advice till it was too late. As to the latter, they are blame-worthy in this, that having received Benefit by the Art of Physick, they act against the Light of Nature in postponing proper Remedies, they know they were recover'd by so often before; and many I have known, who have been advised to forbear going into the open Air, but supposing this a needless Caution, have relaps'd according to Expectation;

M

for

for it is certain, no one ought to venture going Abroad, till they have been gradually accustom'd to bear Cold, and this they ought not to hazard, till they have recover'd their Stomachs and regain'd their Strength; yet so unreasonable have some been, as to suspect they have never been thoroughly cur'd, but that the Relicks of the Fever have occasion'd this Relapse: Wherefore, to avoid this Calumny, and unreasonable, as well as unhandsome Suspicion, I advise all young Practitioners to give strict Charge to their Patients, that they be not too hasty in their Gambols; and that if they do relapse thereby, which there is great Reason to believe, if they act contrary to your Caution, they must remember they suffer for their own Disobedience, and must be admonish'd to look upon your Advice as wholesome, and the Effect of good Observation. The *Crisis* of these slow Fevers is generally deposited on the Bowels; and I have met with some Patients who have been treated in a manner not at all agreeable to their Case in Hand: Their Strength has been such, as to suffer them to walk Abroad; their Appetite has been only so abated, as to be able to make an indifferent

I M ent

ent Meal, the Persons attending have rather suspected some Taint of the *Viscera*, than a lurking Fever; and their Intentions have been levell'd at imaginary Obstructions, and have neglected the Fever; Bolus's, Draughts, Infusions, and Spaw-Waters, have been administer'd to little, if not to a bad, Purpose: I think none can be mistaken, that some sort of Fever reigns, and a little Patience will quickly determine to what Species it may be referr'd; till when let no one be ashamed to look on with Attention; they will find it much safer to stand still, than to proceed too busily; for then our false Indications pursu'd, will necessarily remove the Cause more out of View, by introducing fresh Symptoms, which are owing to ourselves: Thus shall we be confounded, and our Patients ruin'd. I think the only Difficulties, that can occur in the Case before us, are to know whether the feverish Temperament of our Patient is the Effect of a *Hectick*, a *Lent* Fever, a *Diary*, an *Erratick*, or of a *slow Fever*; we know the first and second from the Mildness and Continuance, from their Encrease after Meals, and from an Atrophy introduced by Sweats, Diarrhoea's, great Quantities of Wa-

ter, and the like ; the Urine is of a natural or citrin Colour ; the Hectick arises from an Acrimony in our Juices ; but the *Lent* Fever is a Symptomatical Fever, arising from an Inflammation or an Ulcer fix'd on some of the Bowels. A Diary does not last above three or four Days ; an *Erratick* Fever is when Fever Fits come on irregularly, and never observe any Order ; and a *putrid slow Fever* encreases, declines, and is all along attended with Fits, and an Augmentation of all the Symptoms ; moreover the Urine is first crude, and then concocted, if it has been regularly treated. I must observe to you, that a Diary may, by Mismanagement, be hurried into a putrid Fever ; and on the other hand, I have seen a putrid Fever of a kindly Sort turn'd off in a short Time with low and watry Diet ; Sweats have follow'd, and have quite carried it away : Again, Fevers have often been turn'd into Hecticks, when left to Nature especially ; because by a partial Victory gain'd over the putrid Matter by Sweats, by Perspiration, by Stools, or by a Sediment in the Urine, the Blood is left of an acrimonious Nature, and irritates the Fibres every where, and raises thereby a slow Heat ; and

I have observ'd the *slow Fever* turn *Erratick* upon the same Account. There is some Variety to be observ'd in the Cure of these several Fevers, which it may not be amiss to hint at in as brief a Manner as may be. A *Diary* from hard Drinking, or from too great Heat of the Sun, or from a little Cold, needs very little Help from Physick; for if the Patients will keep their Room, and avoid any Errors in the six Non-naturals, that is, avoid the evident Occasion of it; if they make their Meals of thin Broth, Water-gruel, or Sack-whey, and if they encourage Sweating, it goes off in two or three Days: It is easily distinguish'd from a putrid Fever, from the different manner of Invasion; for in a *Diary* the Patients are not seiz'd with Shiverings, which are a Characteristick of all putrid Fevers. An *Erratick* Fever may be variously consider'd, for if we take it as an Attendant to a Scurvy, it is then only an Acrimony or Saltness of the Blood, which occasions Sweats at Night, and an Atrophy from thence, and which in the Day-time brings on Flushings in the Face, and a Heat in the Hands and Soles of the Feet; and then it is only treated as a saline Acrimony, by

Milk-Waters, by Decoctions of cool Herbs, by *Sal Prunella*, by gentle Sours and Alkalines blended, or by testaceous Powders : But the *Erratick Fever* I here speak of, is truly a Fever, only it observes no Order in its Returns ; and this should first be treated with gentle Discharges, such as the Nature of the Fever will bear, after which the Bark will take Place, because the Blood shifts ; and this I have often experienced to be a successful Method. A *Lent Fever*, depending on some fix'd Cause of the Bowels, must be cured by having Regard to those Causes, some of which I shall enumerate ; namely, if it depends on an Inflammation of a slow Kind, or of that Kind which the Surgeons call *Pblegmions by Congestion*, which it generally is of, if the Liver, Spleen, the Pancreas, or the Misentery be seiz'd, then Bleeding with Diluters and nitrous Medicines are its adequate Cure : If it depend on an *Extravasation*, there are various Means of curing it, but we must avoid Suppuration in internal Extravasations ; if possible, Discussion or Repulsion must be attempted ; we must make proper Discharges from the Veins by Bleeding, from the Mass of Juices by gentle Catharticks ;

tharticks; and we must give internally *Ape-*
rients, and apply them externally, to re-
 mand the extravas'd Matter into the Blood
 again: This is always attended with a con-
 tinual and lasting Pain of the Part affected:
 If it depends on an Ulcer, then all *Vulnera-*
ries must be administred internally; but to
 speak Truth, when the Viscera are ulcerated,
 there remain but small Hopes of Life:
 That which depends on Worms, must be
 attempted with *Æthiops Mineral*, *Coral-*
line, burnt Hartshorn, and many such *Ver-*
misuges: If it depends on a Corruption of
 Humors, that is, on their being too much
 exalted, as a *furor uterinus* depends on the
 Semen being too acrimonious; we are to
 have Regard to the peculiar Depravity, and
 remedy it according to the Rules of Art.
 A *Heetick* is remedied with gelatinous,
 watry, milky, and mucilaginous Remedies;
 Bleeding, Vomits, Catharticks, and Diapho-
 reticks must be avoided, because they dis-
 charge, and because they heat the Blood;
 Cordials of the testaceous and gentle *Aro-*
matics are necessary: What will *absorb*
Acrimonies are convenient; hence is it
 that Pearls, Crabs Eyes, and Coral, are
 prescrib'd; hence is it that *Garmannus's*

Tinctura Antiphthifica is of use ; and many give the Bark in this Case ; but we in *England* succeed well with a Diet of Asses Milk ; their common Drink ought either to consist of Almond Milk, or of a Decoction of *Sarsa* and *China* Roots, of Hartshorn Shavings, of Maiden-Hair, and of candied Eryngo Root : Their Nourishment ought to consist of Rice, Oatmeal, or Panado ; and at Dinner, Chicken, Rabbit, or Veal. Lastly, the *slow Fever*, which began with a Chills or Shivering, must be cured, whether it be malignant, or only slow without any Malignity, after one and the same Method ; namely, by Blisters, testaceous and volatile Remedies. Thus may those, who are under Doubts, satisfy themselves in a convenient Space of Time, and run no Risque of their Patients Lives, or of their own Reputations.

Periodical Coma's have of late been very common ; so soon as the Fit was over, the Drowsiness abated, till the Fever return'd ; the Brain suffers in Proportion to the Quantity deposited on it : The Fit rarefying the Juices, the Fibres of the Brain are so distended, that a Stupor and Sleepiness ensue for a Time ; the rarefy'd Blood in the
Vessels

Vessels compresses the cortical Substance of the Brain, and hinders a due Secretion of the animal Spirits, from whence there is little or no Secretion of them, and a slow Motion ensues, attended with a Sleepiness: As Watchfulness depends on too rapid a Motion of the Spirits, and a too great Elasticity of the Nerves, so Sleep is caus'd by too slow a Motion of these Spirits, and on a Relaxation of these Nerves. The best Evacuations are Blisters, which rouse and discharge too: Bleeding is not beneficial, unless the Body be very plethorick; gentle Physick in the beginning is of great Use; but the Bark and Thea complete the Cure; because the *Bark* takes off the Exacerbation, and *Thea* the Inactivity of the Juices. It is much better that a Fever begins than ends with *Coma's*: Because in Beginnings of Fevers, the Symptoms are produc'd from the Humors passing thro' the Parts, whereas at the latter End, they are caus'd from these same Humors deposited upon the Parts; wherefore are any Symptoms in the Beginning easier to relieve, than at the Ending: And what at last is dangerous, is at first not much to be dreaded. There is great Difference between a rapid Circulation

on

on and a Stagnation ; between too great a Fluidity, and the Blood turning into a Solid. It is easy enough to abate the former, but not possible almost to return a *Coagulum* into a Fluid again : And hence the great Disparity of Success arises between any the minutest Symptom at the Ending of Fevers, and in the Beginning. This Observation may be confirm'd by Numbers of Experiments, and that it may better appear, I shall give one or two Instances ; Phrenzies in the Beginning of the Small-Pox, are only Signs of the Blood's too rapid Motion, and Bleeding, with a cool Regimen, does presently remove them ; whereas if they come on at the State or before, they require exquisite Care, and a due Regimen, the Discharges are not so safe, and Opiates are wanted in large Doses, and it is a considerable Time before you can get them to yield, if the Affair can be done at all. *Colicks* in Fevers at the Beginning are mostly flatulent, but if they come at the latter End, they are generally Inflammatory. Watchings in beginning Fevers, are often attended with a large Pulse, and then Bleeding and gentle Opiates may be given ; but at the End, the Pulse is small, and Opiates

ates wou'd throw your Patients into a deep Sleep, and wou'd hurry on Death. Vomitings in the Beginning of a Fever do prove, that the Humors are gather'd in the Stomach from some Debauch, or some irregularity of Diet; but at the latter End, they denote a Separation of Humors from the Blood: In the first Case we may promote their Expulsion with gentle Emetics, and may even venture to carry them downwards; but in the Conclusion of a Fever, we dare attempt neither, because we might exhaust the Spirits, or raise Tumults in the Humours: If a Jaundice break forth on the fourth Day of a Fever, it is much better than if it comes at the Conclusion of a Fever; because the first is most likely Critical, and the latter most commonly Symptomatical. Thus we see how Symptoms are govern'd by the Times of a Disease, and how we are govern'd in our Prognosticks by these Seasons of Diseases: And Inflammations, Pains, Bleedings, and Fevers in the Beginning have a quicker Circulation than in their Decline; when the Blood fixes on the Parts every where, and is not readily remov'd from the Parts it fixes upon, as Experience teaches us daily.

I have

I have observ'd a Difficulty in Breathing to attend these Fevers, in Persons whose Habit was scorbutical ; because the Lungs are stuff'd with a viscid Blood, and cannot readily transmit the Blood circulating with an unusual Degree of Swiftnefs, and the same happens to them, that wou'd befall 'em, if they walk'd up Hill, or up a Pair of Stairs ; and not only the Lungs are stuff'd with Contents clinging to the Walls of their Vessels, but the Muscles of the Breast also have their Share of Obstruction ; as in Pleurifies there is an Inflammation, that is, a Tumor, and where there is any Tumor, the Lungs can't expand themselves freely, nor can the Parties breathe freely at that Time ; so in such a Difficulty, the Vessels will become rigid and extended more than usual ; For every Obstruction or Impediment in a Vessel produces a Sort of Tumor, or preternatural Largeness above the Part so obstructed ; and in Blood a little sharper than naturally it shou'd be, this amounts to a Species of Inflammation. The Lungs are so necessary an Organ, that a small Obstruction there, is of an infinitely ill Consequence to Life ; and therefore the least Difficulty of Breathing, or the smallest Im-

Impediment in their Function, may prove dangerous in the End : It also happens upon Efforts that are about to be made, when the Blood throws off some noxious Parts into the Breast ; but this seldom is the Case, till about the eleventh Day, when regular and critical Rashes appear : I have also observ'd, that in an irregular Administration of the Peruvian Bark in a Fever, the Patient has all at once been surpriz'd with such a Difficulty of Breathing, and an universal Eruption of vesiculated Eruptions : And it is Odds, but by such Management some fixt Disease had been fram'd in some of the *Viscera*. In others, such a Difficulty depends on the Nerves convuls'd and contracted, and this happens mostly in hysterical Persons, and they are taken with a dry Asthma, and are generally convuls'd elsewhere. As to the Methods of Cure, they must be varied according to the Causes ; however in Fevers, Blisters are mostly requir'd, because they discharge and call off the Bent of Humors towards the Lungs ; and I must observe to you, that the Calves of the Legs or the Thighs, or both, are almost a sudden Relief for Difficulties of Breathing ; not that I suppose there is any other

other Communication between the Lungs and the lower Parts, than that we call the Humors off from the Lungs to a distant and less noble Part, of which more has been said in the Preface: In nervous Cases, the Lac Ammoniacy, the Juleps of Rue-water, Pæony compound, Tincture of Castor, and Bolus's of volatile Salts, *Castor, pulv. ad Guttetam*, and Venice Treacle are commendable. In *Rashes* about to break forth, we must give all the volatile Salts, as well as all cordial Remedies in Use to encourage the Eruption; this sort of *Abstima* is known or guess'd at, by its coming on so suddenly, and beyond all Expectation, and by its Driness; as also by looking on the Breast, you will probably perceive some small Bladders, by holding a Candle on one Side of the Breast, and placing your Eye on the opposite Side. The Difficulty attending scorbutick Persons, is generally co-eval with the Fever; so soon as the Fever begins, this Symptom attacks the Patients, and it lasts for some Time, or till true Methods are used for abolishing or lessening it: Bleeding is requir'd in the Fit, to such a Quantity as the Patient's Strength will bear, and the Symptom demands conjointly:

If

If the Difficulty be great, and their Strength be in full Vigour, we may draw off as much by Degrees, as will thoroughly take away the Symptom, having Regard to its Cause; the Patient's Strength wont bear so much Evacuation as the Symptom demands, you must act with great Caution, and give Notice under what dangerous Circumstances the Patient is plac'd; and thus you will gain Applause: As to that Difficulty of Respiration which attends Horrors in the Beginning of Fevers, it is taken off as the original Cause is, to wit, by plentifully administering volatile Spirits, warm Wine and Cordials.

BESIDES the *Quickness* and *Rareness* of the Pulse before-mention'd (*Pag.* 118.) in old Persons, I have very lately observ'd a *quick, rare, and strong* Pulse in a Person of Vigour, and in his Prime; the Fever prov'd fatal by a Neglect of himself; to the Elasticity and Flexility of the Vessels, we must add a Quantity of Spirits for a Cause; Vessels ought naturally to be flexible and elastick; Rigidity and Laxity wou'd destroy this Mean, for so soon as Vessels grow stark, their Systole and Diastole are at an End; and if they become flaccid, they yield too much,

much, and beat too slow, and cease at last to beat at all. This double Property therefore of the Vessels has certain Limits; and altho' *Quickness* denotes an Extreme of Elasticity, yet this *Extreme* it self has Degrees, which Experience only will inform us of: What is said of Elasticity, is true in Relation to *Flexility*, which has its Limits also; but which we are intirely ignorant of; the Rareness of the Pulse depends on this Cause, whose Degrees we are to learn by Observation: A cohesive Blood, render'd such by Salts lodg'd in it, will stimulate seldom, and for the most Part irregularly; a cohesive Blood affords few Spirits, unless such as are forc'd into the Brain; the Strength of the Pulse therefore depended on a Quantity of Spirits, which in Fact were the Effect of spirituous Liquors thrown plentifully in: The Consequence therefore was fatal, because the Vessels were faulty in their Function, and the Spirits in their Quantity, which drove in a Quantity of Fluids into the smallest Channels, that did not circulate, but lodg'd there, and overcharg'd the Brain.

I fear my Readers will be wearied out with a Detail of Particulars contain'd in these

these Sheets ; if I had wrote however in an historical Method, it is certain there wou'd ha' been greater Reason to complain of the Length of them ; the Cautions are such as resulted out of Observations repeated ; if they coincide with any that have appear'd, I flatter my self that somewhat more is said, than those Authors have remark'd in so small a Compass ; if any Difference appears in some of them, let them remember, that Cases are seldom so alike, as not to admit of some Variety. I shall make no further Apology for them, than that they are Cases without Names ; and that I have not been oblig'd to relate any whole Case, only have in various Paragraphs spoke of all the Accidents that have for some Tract of Time befallen Patients, and have class'd the Symptoms without Order. Thus have I avoided many Repetitions, which must otherwise have happen'd, without this Method ; for how is it possible in so many Histories, as these Sheets are compil'd out of, but Blisters must have been mention'd to have been apply'd over and over again, or as often as we saw their Spirits or Fever requir'd it, where all that cou'd ha' been added was to relate their Success ; but as the Case

now stands, I have given a general Remark on Blisters, and have added what I found necessary to be thought of their Use in the Cases I had under my Care, which is making short Work of tedious and voluminous Histories.



F I N I S.

T H E I N D E X.

The TABLE of *the* PREFACE.

W H Y these Sheets are
publish'd Page 3

Why they are call'd *Ob-*
servations, and not *Histo-*
ries *ib.*

Of what Kind it has been
hitherto *ib.*

How a Fever will take its
Course, and what is to
be expected from it 4

These Sheets confirm what
is written in the *Criticon*
Februm, and add more
Light to the Subject, and
why *ib.*

What Qualifications neces-
sary to make Observa-
tions in Fevers 5

The Subject is inexhaustible
ib.

Easy to know whether an
Author offends *ib.*

The great Mischief of Gra-
phical Descriptions, as
they are managed 6

What Signs of the Disease
a young Physician should
labour to know *ib.*

What Pathognomonick
Signs, what common 7

How necessary the Know-
ledge of the Disease is,
and how we are misled
from its Discovery *ib.*

Rules of Art to be known
ib.

Distinguenda to be known
8

Stated Methods of curing
Diseases is a dangerous
Error *ib.*

Who are mistaken by fol-
lowing stated Methods *ib.*

Sydenham, and other Practi-
cal Authors, of no Au-
thority *ib.*

Jaundices not always cur'd
alike 9

What proper in some *Jaun-*
dices *ib.*

In taxing some Practices;
the Authors of those Pra-
ctices are exempted from
Error *ib.*

Dr. *Sydenham* a judicious
Author, and to be imi-
tated *ib.*

Causes have determinate
Signs to discover them
10

- Physicians must not be superficial, but must know their whole Art *ib.*
- Time to be caught by the Forelock in Fevers, and why *ib.*
- Convulsions, how *ib.*
- We must revulse in them 11
- What is the contrary Side in them, to which Revulsions are to be made *ib.*
- All our Nerves do probably decussate *ib.*
- Convulsions, from whence *ib.*
- Whether Revulsions be barely titular 12
- Revulsions are to be made to distant Parts *ib.*
- Practice acts against this Rule, altho' the Practitioners acknowledge the Theory *ib.*
- Blisters ought not to be first apply'd to the Neck 13
- Revulsions are double *ib.*
- A Revulsive mention'd that is seldom used in Practice, which however is useful, and its Use might be extended, and why 14
- This Sort of Revulsive has obtain'd in Surgery, and is to be prefer'd to most Interceptives 15
- Many Particulars there are, which have never yet been publish'd *ib.*
- Many *Desiderata* yet in the Art of Physick 16
- Physicians too forward in giving in their Reasons for Effects *ib.*
- Dough's Fermentation, how stopt 17
- The working of Beer, how to stop *ib.*
- First Way *ib.*
- Second Way *ib.*
- Third Way *ib.*
- How the Bark may work *ib.*
- Why it does not always work downwards *ib.*
- Reason according to Effects *ib.*
- By Chymistry or Mechanicks *ib.*
- How much we are oblig'd to Chymistry 18
- How Chymical Principles work *ib.*
- What Acids do *ib.*
- Why they do it *ib.*
- What Acids are *ib.*
- Why they act 19
- Terms divide Physicians, and how trifling some of their Disputes are *ib.*
- The Manner how a Fever is produc'd *ib.*
- These Sheets are Cases, related cautionarily 20
- The Cause of a Fever *ib.*
- Some *Postulata* relating to the Cause of it *ib.*
- An Excess of Circulation, and its natural Effects 21
- Rhodius's*

- Rhodium's* Remark just, and why 22
 A strong and good Pulse are not the same Thing 23
 Strong Pulses indicate Discharges *ib.*
 If no Extravasation, Discharges useful *ib.*
 If Extravasations are irremediable, Discharges to be made *ib.*
 These Particulars account for Fevers *ib.*
 New Indications may possibly be discover'd by them 24
 Practice cannot be built upon Particulars *ib.*
 Wherefore vulgar Practices dangerous to be relied on without Judgment *ib.*
 A Fever taken for a Consumption *ib.*
 Inadvertency often a Cause of Mistakes 25
 Mismanagements make a Disease hard to be known *ib.*
 Successions of Diseases, which *ib.*
 How to discover Diseases *ib.*
 Enemies not to be avoided 26
Quincy's Impertinence, how corrected *ib.*
Euodia, what *ib.*
 A Recantation upon Conviction a Sign of a Man of Honour 27
- No Discouragements to be given to the Endeavourers of Advancement in Physick 28
 What Service yet remains to be done to the Art of Physick *ib.*
 What we generally suppose first in curing *ib.*
 The Diseases of the Fluids and Solids, how known *ib.*
 Diseases the most simple are a Complex of Causes 29
 A Pleurisy, what *ib.*
Quere's about it, and how easily Mistakes may happen about its Treatment *ib.*
 A Physician can never be too nice in his Inquiries 30
 When the principal Mistakes are committed in it *ib.*
 Education now too Perfunctory *ib.*
 What the Error in it *ib.*
 Particular Practices once more inveigh'd against 31
 What Lawyers and Divines study first *ib.*
 Examples not the best Method of studying *ib.*
 What puzzles Physicians bred up in this Manner 32
 Physick in Danger of turning Empirical *ib.*

The TABLE of the
BOOK.

F urther Remarks on Fever	1	A perfect Crisis, what, and how accomplish'd	6
Shiverings thro' the whole Course of the Fever	1	Nature's Laws to be follow'd	<i>ib.</i>
How they who shiver feel to the Touch	2	The Pulse absolutely necessary to be regarded in Fevers, and what more	7
Critical Shiverings, how known	<i>ib.</i>	The Quantity of the Cause to be regarded, and by what Means	<i>ib.</i>
Cause of Shiverings	<i>ib.</i>	What directs us in the Prognostication	8
How to relieve them	<i>ib.</i>	Look upon the Patient's Breast in Fevers	<i>ib.</i>
Tentative Methods	<i>ib.</i>	When to proceed to Extremes	<i>ib.</i>
Unequal and small Pulses	<i>ib.</i>	Methods in petechial Fevers	9
Plethoricks with a small Pulse	3	Dilution	<i>ib.</i>
Cautions, what to do	<i>ib.</i>	Stimulation, by what means	<i>ib.</i>
Pulse oppress'd and depress'd	<i>ib.</i>	These Methods, how long to be pursu'd	10
Bleeding, when requir'd	<i>ib.</i>	Catharticks, when given	<i>ib.</i>
What happens from Bleeding	<i>ib.</i>	Paregoricks, when to be given	<i>ib.</i>
Reasons of Oppression of the Pulse	4	Small and weak Pulse, what its Effects, how caus'd	<i>ib.</i>
What Sort of Pulse an unequal one is, and what it argues	<i>ib.</i>	Called Convulsive	11
An oppress'd Pulse distinguish'd further	<i>ib.</i>	Heat to be regarded	<i>ib.</i>
Whether natural Evacuations be a Circumstance forbidding Bleeding	<i>ib.</i>	How to encrease Heat	<i>ib.</i>
The Answer Negative, and why	5	What Standard of Heat to be observ'd, and how	<i>ib.</i>
The Quantity to be drawn off	<i>ib.</i>	Symptoms, how reliev'd	12
Bleeding only eradicates the Symptom	<i>ib.</i>	Inflammatory Symptoms, how caus'd, and how reliev'd	<i>ib.</i>
Fevers cured by Crises, and how	<i>ib.</i>	The Standard of Heat is Nature	13
		Some Excess of Heat sometimes allowable and necessary	<i>ib.</i>

- Two Causes of Excess of Heat in some Cases *ib.*
 Opiates, when useful 13
 Bleeding Revulsions, &c. when necessary 14
Venice Treacle common *ib.*
 Who fond of it *ib.*
 Salivation, how promoted, and why *ib.*
 What Care ought to be taken to distinguish between essential and symptomatical Fevers 15
 How to distinguish with Judgment between them *ib.*
 Method of curing each *ib.*
 The Danger of treating a mesenterick Fever, as an Inflammation of the Mesentery *ib.*
 What happens to a Fever when a Cholera succeeds it 16
 The Danger of unripe Fruit, what it does to our Humors *ib.*
 Whether the Fevers being coeval with a Cholera, or the Cholera independent, alters the Method of Cure *ib.*
 Vomiting and Purging must be regarded along with the Fever 17
 If independent on the Fever, what is to be done *ib.*
 What stops a Cholera *ib.*
 The Danger of a Cholera and Fever *ib.*
 It requires Haste and Judgment *ib.*
 The Method of Cure *ib.*
 When the Cholera is a Symptom *ib.*
 The Indications 18
 The Reasons *ib.*
 The Fever when to be regarded 19
 With what Remedies *ib.*
 The Diet of Fevers *ib.*
 How the Blood becomes too dry, and the Damages from thence *ib.*
 Who most subject to Fevers 20
 Physicians, why so seldom attack'd *ib.*
 What Quantity of Opium the *Turks* take *ib.*
 A Lady that took large Quantities of Opium *ib.*
 How Custom works 21
 Preventing Remedies for Fevers *ib.*
 A reputed Arcanum to prevent the Small Pox *ib.*
 Why such operate *ib.*
 Inconveniencies from them 22
 Upon Bleeding, the Fever appears more *ib.*
 The Reason why *ib.*
 Heat proportionable, to what *ib.*
 A Remark hitherto not observ'd on the Places the Blood can stop at 23
 Anxiety, how reliev'd *ib.*
 How Bleeding relieves 24
 Caution to be used *ib.*
 How we endanger a Rupture of the Vessels 25
 N 4 This

- This Mistake often has occasion'd Hæmorrhages 25
 Beginnings to be well managed *ib.*
 The Fever's specifick Nature 26
 The Quantity of Blood to be taken away *ib.*
 A Caution on Bleeding *ib.*
 Ardents rarely met with in our Climates 27
 What to be done in them *ib.*
 Deliriums bring on Extravasations. *ib.*
 What Quantities commonly requir'd to be taken away 28
 Take Care not to endanger a Crisis *ib.*
 What Degree of Motion required in a Crisis *ib.*
 Bleeding at the Crisis to be avoided *ib.*
 When to Bleed at the Crisis, and why 29
 Experience and Reason to be follow'd *ib.*
 The Fit is the most proper Time to Bleed *ib.*
 And why 30
 Many Indications are to be pursued, and why *ib.*
 How to proportion this Discharge 31
 When the Heart contracts itself *ib.*
 Stubborn Eruptions 32
 The Blood's State and Condition *ib.*
 Catharticks ought not to precede *ib.*
 And why 33
 This State of Blood fit to produce Scurvies, &c. *ib.*
 Eruptions *ib.*
 Erosions *ib.*
 Inflammations *ib.*
 Abscesses *ib.*
 Why one large Inflammation is produced, and why many 34
 Indications and Remedies *ib.*
 Their Effects 35
 What Remedies bid fairest, and why *ib.*
 How Eruptive Fevers differ 36
 Why they differ *ib.*
 How Smells differ *ib.*
 How Tastes differ *ib.*
 Eruptions from Variety of Lentors 37
 Various Tastes, how produc'd *ib.*
 Concretions differ in the various Eruptive Fevers, and how *ib.*
 Respiration hindred, and its Remedies 38
 How Diluters act 39
 How Blisters work *ib.*
 Critical Days not to be denied *ib.*
 An Error to pretend to carry off a Fever without Concoction *ib.*
 No Certainty of the Time of a Crisis 40
 The Time of a Crisis to be alter'd by Methods *ib.*
 Slow Fevers have later, high Fevers earlier, Crises *ib.*
 Great

- Great Discharges endanger them 40
 The Discharges lessening the Matter, make a Crisis easier 41
 What is the Case in a beginning Fever *ib.*
 Crisis promoted, how *ib.*
 A rheumatick Fever, how to be managed 42
 In a malignant or pestilential State, what to be done *ib.*
 What to be observ'd in the Urine, and in our Methods from thence *ib.*
 Fits return at a certain Hour, and why
 The Symptoms *ib.*
 A dangerous Error 44
 An Account in particular *ib.*
 Of the Returns 45
 All the nice Degrees of Cohesion not perceptible to us by any Methods, but Experience *ib.*
 How the Juices are made to meet each other 46
 What Means are beneficial *ib.*
 How the Bark acts *ib.*
 Relapses in Quartans frequent 47
 What ensues from thence *ib.*
 What Discharges proper in this Affair *ib.*
 Mercury useful *ib.*
 Prevention of a Quartan 48
 This Method wont always succeed *ib.*
 A Caution 49
 The Effects of lasting *Quartans* *ibid.*
 Scirrhus's how to be cured *ibid.*
 How Mercury hurts them *ibid.*
 How best cur'd *ibid.*
 A Salivation is always critical in Fevers 50
 And in the small Pox *ib.*
 We wait for no Concoction in a Salivation *ib.*
 Its Use ought to be extended *ibid.*
 The Elasticity of the Fibres lost in some, in such Blisters fail, and produce no Effects at all. 51
 How to judge of such a Constitution 52
 Putrid Steams their Effect *ibid.*
 This is the Case in the small Pox. *ibid.*
 The Cause of Loss of Elasticity 53
 Life what it depends on *ib.*
 Rigidity Causes strong Resistance 54
 What to be used, and why *ibid.*
 Relaxing Fomentations *ib.*
 For what Use such *ibid.*
 Malignity in the Blood and Spirits, how discover'd 55
 Its Cause *ibid.*
 Its Remedies *ibid.*
 Catharticks, properly so called, are not given till Concoction 56
 16

- If a Cause is suppos'd, and
 is not the Cause 93
 Catharticks not to be given
 in certain Cases. *ibid.*
Minoratives not to be given
 at all Times 57
 When a Cathartick has been
 of Use. *ibid.*
 It has cur'd with a little
 good Regimen. *ibid.*
 How soon it is safe to go
 Abroad 58
 Mercurials safe Purgatives
 ibid.
 And why 59
 What the Cause of Fevers
 ibid.
 Mercurials act in a double
 Capacity *ibid.*
 When Catharticks can't be
 given, what to be done
 ibid.
Præcipation, what, and
 whether it can be done
 60
 Various *Præcipitations*, and
 their Reasons *ibid.*
 Whether this obtains in our
 Humors 61
 What the Cold Air does to
 our Urine, our *Serum*
 præcipated *ibid.*
 Earths what they do *ibid.*
 What follows in our U-
 rine from Earths 62
 Testaceous Powders, their
 Use *ibid.*
 Practitioners, what they
 have advised *ibid.*
 The Consequence of these
 Drugs *ibid.*
- Where good 63
 What is to be inferr'd *ib.*
 In a petechial Fever, the
 Urine did not subside
 till Earths were given
 ibid.
 Fever is remitting, and ad-
 mits of the Bark *ib.*
 What the Bark is, and
 what it contains 64
 How it acts *ibid.*
 A further Account of its
 Operation, and the Mo-
 dus 65
 When the Bark is tardy,
 what is the Cause 66
 In particular, why the Bark
 has fail'd so much 67
 Why in particular the Bark
 fails. 68
 What to be done when it
 fails 69
 Examples of some cured
 by this Method 70
 Cautions about the giving
 the Bark 71
 An eradivative Road try'd
 with Success. *ibid.*
 Another concurring Cause
 that hindred the Bark's
 Effect 72
 No Time is to be confi-
 der'd in the Administra-
 tion of the Bark. *ibid.*
 An Example 73
 Proper Discharges ought to
 precede the Administra-
 tion of the Bark *ibid.*
 A Caution *ibid.*
 The Advantages of giving
 it late 74
 Necess

Necessary to know the	What ought to precede <i>ib.</i>
Qualities of the Blood	A Remark on Aperients of
<i>ibid.</i>	the Liver <i>ibid.</i>
Who unsuccessful Practi-	Joel's Remarks 83
tioners 75	Constitution of the Patient
Other Remedies used in	to be enquired into 84
Agues <i>ibid.</i>	The Bark can't be taken by
Some give a <i>Succedaneum</i>	many <i>ibid.</i>
for the Bark <i>ibid.</i>	An Observation <i>ibid.</i>
The Remedies for Agues,	Fever occasioned a Colick
how they act 76	85
External Applications of	An Inflammation of the
Use <i>ibid.</i>	Bowels <i>ibid.</i>
What they are 77	The Method <i>ibid.</i>
Whence the Hint taken to	What to be preferr'd to
help the Bark to operate	Physick 86
<i>ibid.</i>	Strong Catharticks destru-
Other Methods <i>ib.</i>	ctive <i>ibid.</i>
The <i>Pondus</i> of Remedies	A Caution <i>ibid.</i>
effectual <i>ibid.</i>	In our Choice what to do
The Cure proves the Cause	87
why things act 78	What to be given in violent
A Difficulty started and	Pains 88
answered <i>ibid.</i>	<i>Chicanours</i> , how they Act
Whether the Bark exter-	without Honour or Re-
nally used, be of any	gard <i>ibid.</i>
Effect 79	Blisters in slow Fevers 89
When the Fever has chang-	A Caution <i>ibid.</i>
ed its Type <i>ibid.</i>	Examples 90
An Ischiadick Pain <i>ibid.</i>	Attenuants, their Effect <i>ib.</i>
Any Commotion rais'd re-	In Rheumatick Fevers,
produces a Fever 80	what to be done and a-
An Instance proving why	voided 91
the Bark is ineffectual <i>ib.</i>	Examples of a true Me-
Returns, why <i>ibid.</i>	thod destructive <i>ibid.</i>
The Time of taking this	Low Diet useful, and when
Bark determin'd 81	dangerous 92
Jaundices, what they de-	Nor Symptoms nor Dis-
note <i>ibid.</i>	eases can be cur'd <i>ibid.</i>
How they happen <i>ibid.</i>	What to be cur'd <i>ib.</i>
Not safe to trust Aperients	
82	The

- The Method of applying
 Blisters 93
 An Author writing on Petechial Fevers remark'd 94
 Who most subject to *Deliriums* *ibid.*
 Who easier cur'd 95
 Men subject to what, Women to what *ibid.*
 A puerperal Fever with bad Symptoms *ibid.*
 A *translative Crisis* 96
 A moderate Discharge throws off Humors *ib.*
 Uterus not sensible of Acrimonies, as the Intestines are *ibid.*
 The Uterus bears Ulcers long 97
 The Intestines cannot bear Ulcers long without Danger *ibid.*
 Don't suppress the *Diarrhoea* quite *ibid.*
 When the Womb will be inflam'd *ibid.*
 What is necessary *ibid.*
 We must answer both Intentions *ibid.*
 What to be done 98
 Lochia are of a virulent Nature, and why *ibid.*
 Blood that is gross and volatile, its Effects 99
 Anxiety, what it is *ib.*
 Its Relief at the beginning of a Fever *ibid.*
 An Emetick prevents Consequences 100
 A Crisis, what it depends on, and how hindred *ib.*
 Sweats that are critical, what to be done *ibid.*
 Cautions 101
 What promotes Sweats *ib.*
 What Quantities allowable of Liquors in Fevers *ib.*
 One chief Indication in all Fevers *ibid.*
 A Caution 102
 Apoplexies *ibid.*
 If periodical *ibid.*
 An Observation *ibid.*
 What they depend on 103
 Remedies *ibid.*
 An Artifice *ibid.*
 Revulsion, what 104
 What Discharge *ibid.*
 What Corroboration *ibid.*
 What follows the loss of the restituent Force of a Vessel *ibid.*
 Diarrhoeas 105
 From whence *ibid.*
 Whether critical or Symptomatical *ibid.*
 Critical and excessive *ib.*
 Critical and insufficient *ib.*
 Symptomatical and excessive *ibid.*
 Symptomatical, and yet beneficial *ibid.*
 How all these are known *ib.*
 Remedies *ibid.*
 Cacochymies to be evacuated 106
 Spirits to be supported *ib.*
 How to curb them *ib.*
 If intirely Symptomatical, what to be done *ib.*
 What Revulsions are to be made 107
 An

- | | | | |
|--|--------------|--|--------------|
| An Instance | <i>ibid.</i> | How an Ulcer bred | 119 |
| Critical, but sparing, what to be done | <i>ibid.</i> | Bilious Colicks, how caus'd | <i>ibid.</i> |
| A Caution | 108 | How distinguish'd | <i>ib.</i> |
| Critical and sufficient, what to be done | <i>ibid.</i> | How cur'd | <i>ib.</i> |
| An Observation | <i>ibid.</i> | If too far advanc'd, what follows | <i>ib.</i> |
| A difficult Task | 109 | Inflammations have some Essentials | <i>ib.</i> |
| Judgment necessary | <i>ib.</i> | And some Incidents | <i>ib.</i> |
| In Relicks what to be done | <i>ibid.</i> | Stimulations of some kinds, from what | 116 |
| The Spirits how affected | 110 | Vapours | <i>ib.</i> |
| A Caution | <i>ibid.</i> | How caus'd | <i>ib.</i> |
| What appears in the various States | <i>ibid.</i> | Spirits, how they move | 117 |
| What to be considered | 111 | How recover'd | <i>ib.</i> |
| How attack'd | <i>ibid.</i> | Frequent Pulses after a Fever | <i>ib.</i> |
| If the Blood is become gross | <i>ibid.</i> | A Caution | <i>ib.</i> |
| A symptomatical Fever, how rais'd | 112 | What to be done | 118 |
| How to discover one | <i>ib.</i> | A quick and rare Pulse | <i>ib.</i> |
| Methods and Remedies | <i>ib.</i> | How to be conceiv'd | <i>ib.</i> |
| How to open inflammatory Obstructions | 113 | A tentative Method | 119 |
| How Salts to be dissolv'd | <i>ibid.</i> | What the Cause | <i>ib.</i> |
| How Viscid dissolved | <i>ib.</i> | The Method of Cure | <i>ib.</i> |
| Chalybeate Waters dissolve Coagulum | <i>ib.</i> | These Pulses explain'd | 120 |
| Coughs at the End of a Fever, how caus'd | <i>ib.</i> | An Error ridicul'd | <i>ib.</i> |
| Not to be neglected; if they do, a Consumption follows | 114 | The Air the Cause of the Relapses, and how | 121 |
| The Method of curing such Coughs | <i>ibid.</i> | Contagion | <i>ib.</i> |
| Salts lodg'd corrode and corrupt the Parts and inflame | <i>ibid.</i> | Infection | <i>ib.</i> |
| | | How distinguish'd | 122 |
| | | Most labour from Infection | <i>ib.</i> |
| | | How to prevent Infection | <i>ib.</i> |
| | | Pulse to be regarded | <i>ib.</i> |
| | | As it helps to prognosticate | 123 |
| | | A Caution | <i>ib.</i> |
| | | What it is that deceives us | <i>ib.</i> |
| | | Quick | |

- Quick Pulse after Fevers 124
 Heeticks return *ib.*
Catachrestical Crifis *ib.*
 What mistaken for Weakness *ib.*
Opiates in Fevers, when to be given, and when not 125
 In organical Discharges *ib.*
 In Convulsions *ib.*
 A petechial Fever 126
 With the Hæmorrhage *ib.*
 Blood smelling 127
 Method of Cure *ib.*
 Another Method *ib.*
 One Flux ceasing, another begun *ib.*
 Stypticks and other Methods 128
Baglivi mistaken 129
 A Physician must act and be directed by Reason *ib.*
 A particular Plague *ib.*
 Sisy Blood what it is 130
 Prov'd *ib.*
 How to be dissolv'd *ib.*
 Whether it can be reongeal'd *ib.*
 An Axiom 131
 The Blood thin *ib.*
 Intentions of cure *ib.*
 How Acids operate 132
 How Stypticks operate *ib.*
 How glutinous Medicines operate 133
 An external Remedy *ib.*
 Intentions of Cure 134
 Different Intentions *ib.*
 Remedies *ib.*
 A purging Potion 135
 Heetical Heat cur'd *ib.*
- The Reasons of Procedure *ib.*
 A Method us'd for the Bleeding 136
 Rashes, whether, always critical 137
 An Error remark'd *ib.*
 What to be done *ib.*
 Expellers dangerous 138
 What to do in Rashes of any Kind *ib.*
 Rashes divided 139
 Relicks, how to discover 140
 A Caution *ib.*
 Bleeding not always a Remedy 141
Sydenham mistaken, has given Rise to some Errors 142
 Malignant Quinzies *ib.*
 Whence 143
 Salts prov'd to be in the Blood *ib.*
 By Experiments 144
 Dr. *Sydenham's* Reasoning 144, 145
 Matter standing still, either turns putrid or gangrenous *ib.*
 How the Flesh feels then, and Pulse 146
 The Symptom depends on a Fever *ib.*
 Various Sorts of Gangrenes *ib.*
 Remedies, Blisters, Cordials 147
 Catharticks *ib.*
 A Retreat dangerous *ib.*
 Where Matter is lodg'd *ib.*
 What

- What to be done 148
 Liniments *ib.*
 Fomentations *ib.*
 Cataplasms *ib.*
 When past Recovery *ib.*
 Causticks don't avail 149
 Bleeding under the Tongue *ib.*
 What Evacuations ought to succeed general ones, and when *ib.*
 Why bleeding in the Foot last *ib.*
 Preparation necessary in opening Obstructions 150
 Tremblings after Fevers *ib.*
 What solitary or symptomatic, and how known *ib.*
 A Translation, what to be done 151
 What to be done if only a Symptom *ib.*
 What to be done when solitary 152
Vitus's Dance at the End of a Fever *ib.*
 What Fevers do to the Blood *ib.*
 What the Remedies *ib.*
 The Case of the Spirits 153
 An Elixir *ib.*
 What Remedies proper *ib.*
 Why the Remedies are useful *ib.*
 A certain Degree of Elasticity due 154
 What Astringents do *ib.*
 A Description of it *ib.*
 Pain of the Back, when and how caus'd 155
 What Remedies us'd ineffectually *ib.*
 Reasons for this Pain 156
 Membranes the most sensible *ib.*
 A Conjecture how the Cure might have been perform'd 157
 Rules of Bleeding *ib.*
 What done in Apoplexies by Bleeding 158
 A fatal Prognostick *ib.*
 Womens Pains in the Back 159
 How Fevers dangerous and treacherous, and why *ib.*
 Symptoms of the slow Fevers 160
 Let Persons in Danger know their Circumstances 161
 What it is that deceives them *ib.*
 1 Intermissions *ib.*
 2 Recovery from Relapses *ib.*
 A Caution *ib.*
 When to go abroad 162
 Unhandsome Suspensions, whence *ib.*
 When slow Fevers terminate *ib.*
 Ill Treatment 163
 How to ascertain the Nature of Fevers *ib.*
 Several Fevers *ib.*
 Hætick known *ib.*
 A Lent Fever known 164
 An Erratick Fever known *ib.*
 The putrid Fever known *ib.*
 How

How the putrid and others thrust	164	Inflammations, &c.	ib.
Cures various	165	A Difficulty in Breathing	172
Of a Diary	ib.	Of what Kind	ib.
Of an Erratick	ib.	1 st . Kind	ib.
Of a Lent Fever	166	Lungs necessary for Life	ib.
Various	ib.	2 ^d . Kind	173
Of a Heſtick	167	3 ^d . Kind	ib.
Of a ſlow Fever of any Kind	168	Methods of Cure	ib.
Coma's periodical, how caus'd	ib.	Reasons for theſe Methods	174
Sleep and Watchings, how caus'd	169	In Raſhes	ib.
What takes them off	ib.	How cured	ib.
Difference between Symp- toms in the Beginning and End of Fevers	ib.	Caution	175
Success various according- ly	170	4 th Kind, and Remedy	ib.
Examples on a Colick	ib.	Another Difference of Pulſe, and whence	ib.
Watchings	ib.	Extremes of Elasticity and Flexibility	176
Vomitings	171	The Nature of the Cau- tions	177
Jaundice	ib.	If any Difference appears, what the Reason	ib.
		Concluſion	ib.

In the Preface, pag. xii. lin. 9. for to, r. from:

B O O K S



BOOKS written by Dr. STROTHER.

I. *MATERIA Medica*: Or, a new Description of the *Virtues* and *Effects* of all Drugs, or Simple Medicines, now in Use: Where from their *Principles*, these *Virtues*, both *Common* and *Specifick*, are shewn, with the *Preparations* of each; and *Prescriptions*: As also judicious Remarks are every where interspers'd. Done from the *Latin* Original of Dr. *Paul Harman*, late Professor of Botany in *Leyden*. To which is prefix'd, a General Introduction, containing a mechanical Account of the Operations of all Medicines upon *Human Bodies*. Also *Critical Observations* are added to each Simple thro' the Whole, wherever it was found necessary. In Two Volumes. Price 10 s.

II. An *Essay* on *Sickness* and *Health*: Wherein are contain'd, all necessary *Cautions* and *Directions*, for the Regulation of *diseas'd* and *bealthy* Persons: In which Dr. *Cheyne's* mistaken Opinions in his late *Essay* are occasionally taken Notice of. The Second Edition. Price 5 s. 6 d.

III. *Criticon Februm*: Or, a Critical *Essay* on *Fevers*; with the *Diagnosticks* and *Methods* of *Cure*, in all the different *Species* of them. The 2d Edition, with Additions. Price 3 s. 6 d.

IV. *Euodia*: Or, a *Discourse* on *Causes* and *Cures*: In Two Parts. The First contains a short and easy Method how to discover the *Causes* of any *Disease*. The Second gives plain *Instructions* how to proceed in the *Cure* of All; but more especially complicated *Diseases*. Price 3 s. 6 d.

V. *Experienc'd Measures* how to manage the *SMALL Pox*; and *Dissertations* upon the *Ingratment* of that *Disease*. With a new *Prefatory Address* to the *Inoculators*. Price 2 s. stitch'd.

Books Printed for C. RIVINGTON.

VI. *Pharmacopœia Practica* : In qua tres Prescripto-
rum Chiliades Morbis omnibus accommodatorum in
Classes digeruntur : Quæ excerpuntur, ex Præscriptis Joh.
Radcliffii, M. D. Pr. 4 s.

VII. *Dr. Radcliffe's Practical Dispensatory* : Con-
taining a compleat Body of Prescriptions fitted for all
Diseases internal and external, selected from the best
Prescriptions chiefly used by Dr. Radcliffe : With Re-
marks and Observations explaining the Virtues and right
Application of each Receipt. The 4th Edition. Price 5s. 6d.

*All Printed for CHARLES RIVINGTON, at the
Bible and Crown in St. Paul's Church-Yard.*

*For whom likewise are Printed the fol-
lowing B O O K S.*

I. **A** *New Treatise on Liquors* : Wherein the Use and
Abuse of Wine, Malt-Drinks, Water, &c. are
particularly consider'd in many Diseases, Constitutions,
and Ages ; with the proper Manner of using them hot,
or cold, either as Physick, Diet, or Bath ; containing
plain and easy Rules for the Preservation of Health and
the Attainment of Long Life. The Whole being a
full Determination of all that hath been publish'd on
those Subjects, tho' chiefly contrary to the Opinions of
Dr. Cheyne, Dr. Rouse, Dr. Short, Lomius, Vander Hey-
den, Dr. Hancocke, Mr. Smith, and Others. By James
Sedgwick, Apothecary at Stratford Le Bow.

II. *Mechanical Essays on the Animal OEconomy* :
Wherein not only the Conduct of Nature in animal
Secretion, but Sensation, and human Generation, are
distinctly consider'd, and anatomically explain'd : As
also the particular Manner of the Operation of a Medi-
cine is accounted for, and many other curious and un-
common Subjects are treated of ; necessary for all that
study Nature, and particularly those that make Physick
or Surgery their Practice. With a Catalogue of Authors
consulted thro' the Whole. By James Hanley, Surgeon.

III. A

Books Printed for C. RIVINGTON.

III. A compendious and new Method of performing *Chirurgical Operations* fit for young Surgeons. To which are added, Short and easy Directions how to manage the Venereal Disease. By *Edward Dann*, Surgeon, belonging to the *African Company*.

IV. A new Theory of Physick and Diseases, founded on the Principles of the *Newtonian Philosophy*. By *Nicholas Robinson*, M. D.

V. *A New Method of treating Consumptions* : Wherein all the Decays incident to human Bodies are mechanically accounted for : With some Considerations touching the Difference between Consumptions, and those Decays that naturally attend Old Age. To which is added, Arguments in Defence of the Possibility of curing Ulcers of the Lungs : As also Reasons demonstrating that the irregular Discharges of all the Evacuations in Consumptions arise from the Resistance of the Heart not decaying in a simple Proportion to the Resistance of the other Parts. By *N. Robinson*, M. D.

VI. *The Art of Surgery* : In which is laid down such a general Idea of the same as is founded upon Reason, confirm'd by Practice, and farther illustrated with many singular and rare Cases medico-chirurgical. In Two Volumes. The Second Edition, with large Additions. By *Daniel Turner*, M. D. of the College of Physicians in London.

VII. *A Treatise upon the Rheumatism* : With Observations upon some Causes that may produce it. By *John Chesire*, M. D. Price One Shilling.

VIII. *The Cooks and Confectioners Dictionary* : Or, *The Accomplish'd Housewives Companion* ; containing,
1. The choicest Receipts in all the several Branches of COOKERY ; or the best and newest Ways of dressing all Sorts of Flesh, Fish, Fowls, &c. for a common or noble Table ; with their proper Garnitures and Sauces.
2. The best Way of making Bisks, Farces, forc'd Meats, Marinades, Olio's, Puptons, Ragoo's, Sauces, Soops, Pot-

Books Printed for C. RIVINGTON.

Pottages, &c. according to the *English, French, and Italian* Courts. All Sorts of Pickles. 3. All Manner of Pastry-Works, as Biskets, Cakes, Cheese-Cakes, Custards, Pastes, Patties, Puddings, Pyes, Tarts, &c. 4. The various Branches of Confectionary; as Candying, Conserving, Preserving, and Drying all Sorts of Flowers, Fruits, Roots, &c. Also Jellies, Composts, Marmalades, and Sugar-Works. 5. The Way of making all *English* potable Liquors; Ale, Beer, Cyder, Mead, Metheglin, Mum, Perry, and all Sorts of *English* Wines: Also Cordials, and beautifying Waters. 6. Directions for ordering an Entertainment, or Bills of Fare for all Seasons of the Year; and setting out a Desert of Sweet-Meats to the best Advantage. With an Explanation of the Terms used in Carving. According to the Practice of the most celebrated Cooks, Confectioners, &c. in the Courts of *England, France, &c.* and many accomplish'd Housewives. The Second Edition, with Additions. Revised and recommended by *John Nott*, late Cook to the Dukes of *Somerset, Ormond, and Bolton*; Lord *Lansdown* and *Ashburnham*.